Economic Development, Social Structure and Population Growth

VICTOR S D'SOUZA

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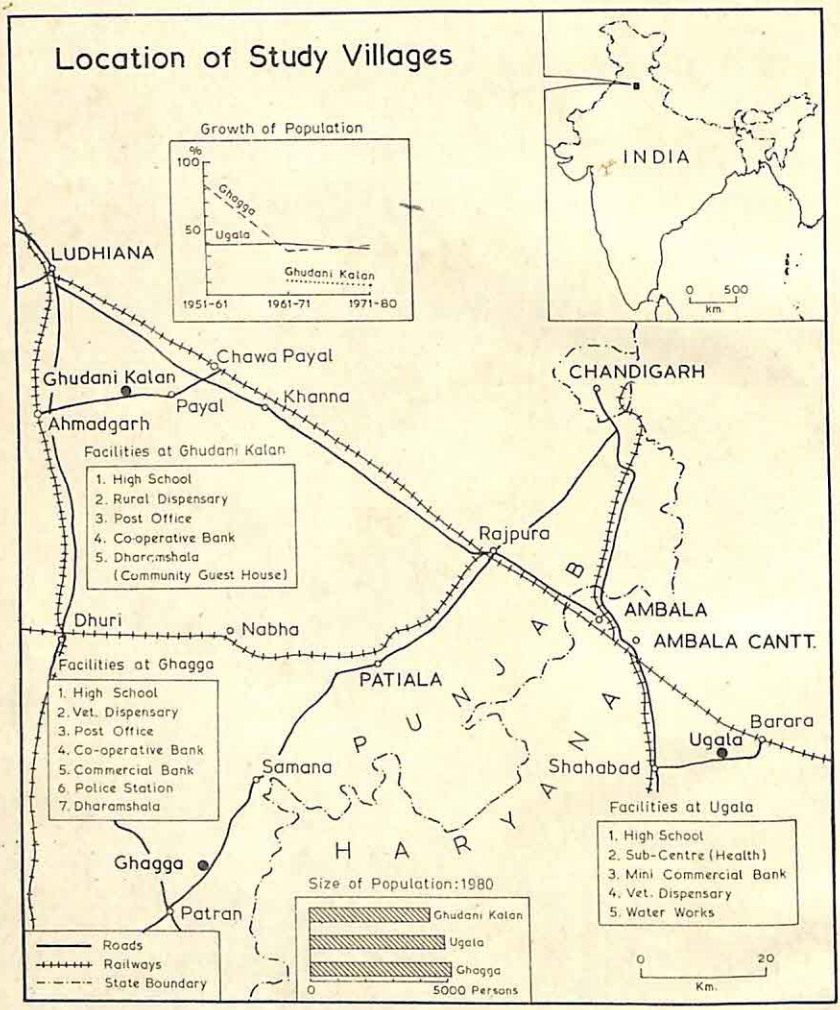
Location of Study Villages
Growth of Population
%
100
50
Ghagga
Ugala
Ghudani Kalan
1951-61
1961-71
1971-80
INDIA
0
500
km
LUDHIANA
Chawa Payal
Ghudani Kalan
Payal
Khanna
Ahmadgarh
CHANDIGARH
Facilities at Ghudani Kalan
1. High School
2. Rural Dispensary
3. Post Office
4. Co-operative Bank
5. Dharamshala (Community Guest House)
Rajpura
Dhuri
Nabha
AMBALA
AMBALA CANTT.
Facilities at Ghagga
1. High School
2. Vet. Dispensary
3. Post Office
4. Co-operative Bank
5. Commercial Bank
6. Police Station
7. Dharamshala
PATIALA
P U N J A B
Barara
Ugala
Samana
Shahabad
Facilities at Ugala
1. High School
2. Sub-Centre (Health)
3. Mini Commercial Bank
4. Vet. Dispensary
5. Water Works
H A R Y A N A
Ghagga
Size of Population: 1980
Patran
Ghudani Kalan
Ugala
Ghagga
0
5000 Persons
Roads
Railways
State Boundary
0
20
Km.

Economic Development, Social Structure and Population Growth

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December 1984 VICTOR S. D'SOUZA

1

A Perspective for Understanding the Relationship Between Economic Development and Population Growth

Economic Development and Demographic Transition

The theme of this book, economic development, social structure and population growth, falls within the broad subject of population and development. The problems concerning the relationship between population growth and economic development have received increasing attention during the last three decades. The subject has special relevance for the countries of the Third World where the need of the hour is to check the high rates of population growth and to stimulate the existing low rates of economic development. It is in the fitness of things that the International Union for the Scientific Study of Population (IUSSP) has brought out two volumes on the subject focusing the discussion on the Third World (Tabah ed., 1975a). The United Nations World Population Conference held in Bucharest in 1974 adopted a world plan of action to support programmes relating population policy to development. Such a plan of action was readily endorsed by the Third Asian and Pacific Population Conference held in Colombo, Sri Lanka, in 1982.

One of the major assumptions in the study of population growth and economic development is that the two variables are negatively related to each other; a high rate of growth of population inhibits economic development and a developing economy tends to bring about a decline in fertility. Therefore, policies related to population growth and economic development in the Third World should spell out strategies for bringing about a decline in the rate of growth of population and accelerating the rate of economic development.

The relationship between population growth and economic development has received special attention in the theory of demographic transition, which is aimed at explaining the shift from high to low birth and death rates in the developed countries of the West in the course of their economic development. This theory describes the historical process of the major changes in the demographic variables in terms of four different stages.

The first stage of the process of population change refers to the period prior to the onset of economic development when both the birth and death rate are very high, which, because they balance each other, results in a slow rate of growth of population. The second stage commences with a transformation in the economy, leading to a sustained economic growth, which by improving the physical conditions of living brings down the death rate. At this stage, the fall in the birth rate lags far behind the fall in the death rate and this disequilibrium results in a rapid growth of the population.

In the third stage the society is subjected to the problems of population pressure. In the changing economic context children cease to be an economic asset and the small family becomes more functional. Consequently, the birth rate tends to fall more rapidly, narrowing the gap between the birth rate and the death rate. Finally both birth and death rates level off, striking a new balance at a lower level, so population once again begins to grow only slowly. This is the fourth stage which the developed countries are supposed to have achieved.

Most of the developing countries such as India are experiencing a rapid growth in their population mainly as a result of a steep decline in their death rates and are said to be in the second stage of demographic transition. There is, however, a debate as to whether the birth rates should be reduced artificially through the implementation of family planning programmes or whether the decline in the birth rate should be allowed to take its natural course as a reaction to the active policies of economic development.

Those who emphasise the strategy of economic development for reducing the family size assume that the decline in fertility of a developing country is dependent upon the development of its economy—once the economy is developed, fertility will decline inevitably. On the other hand, they presume that the effect of an organised family planning programme cannot achieve lasting results. So it is advocated that in order to reduce family size, action must start with the modernisation of the economy and improvement in the quality of life. On the other hand, there are those who assume a reciprocal relationship between the successful implementation of the organised family planning programme and socio-economic development (Sweezy, 1973).

Shortcomings of the Economic Decision-making Models

Whereas it is recognised that the subject matter concerning the relationship between population growth and economic development falls within the domain of several disciplines, major contributions have been made mostly by demographers and economists. Such writers, while accumulating evidence about the negative relationship between the two given variables, have put forward economic models of decision-making about the size of the family as explanations.

A typical economic decision-making model for fertility control is that formulated by Leibenstein (1975). Like other such models which draw their inspiration from the ideas put forward by Becker (1960), this model is also based on the analytical concept of children as durable consumer goods. Accordingly it is assumed that the development of the economy releases certain economic forces which diminish the utility of children of higher birth-orders for their parents. In the elaboration of his model, Leibenstein has identified six types of utility which parents may derive from children: (*i*) consumption utility, (*ii*) work-economic utility, (*iii*) economic risk-reduction utility, (*iv*) old age security, (*v*) long-run family status maintenance, and (*vi*) contribution to the extended family. These utility factors change in a developing economy and it is argued that the higher the socio-economic status of the parents the higher is the marginal utility cost for having additional children, thus accounting for the fact that in general the higher the socio-economic status of the parents the lower is the fertility.

In short, according to the economic decision-making models, parents are guided by the concept of marginal utility in deciding whether or not to give birth to a child. On the other hand, the economic forces let loose by a developing economy diminish the marginal utility of children of higher-order births. The parents of higher socio-economic status are more affected by such factors, while in a developing economy more and more people attain higher economic status. Because of the inter-relationships of this nature, economic development, therefore, inevitably leads to a decline in fertility in a society.

The concepts of economic development as well as of socio-economic status used in the economic decision-making models are coarse. Actually the per capita income is used as an index for economic development (Leibenstein, 1975: 491) and household income as an index for socio-economic status (*ibid.*: 486). Consequently the validity of the model lies in demonstrating that the higher the per capita income of a country the lower is its fertility; within any country, the higher the household income of a category of persons the lower is their fertility; also, as the per capita income of a country goes on increasing its fertility will keep on diminishing.

The relationship between population growth and economic development (or that between family size and economic variables) can be analysed in two different ways. In one kind of analysis, family size may be regarded as the dependent variable and economic variables as the independent ones, as in the case of the analytical model briefly outlined earlier. In the second kind of analysis, family size is regarded as the independent variable and economic factors as the dependent ones. Analytical models used in the second kind of causal assumption are different from those used in the former. A review of studies made by Ruprecht (1975) which deal with the economic consequences of family size shows that there is a negative relationship between family size, on the one hand, and consumption per family member, physical development in children, and participation in the labour force by women, on the other, and a positive relationship between family size and prevalence of malnutrition and mortality. There is also evidence to show that the economic position of families improves as family size is reduced.

On the whole, therefore, the evidence accumulated by studies viewing family size as a dependent variable and economic variables as independent ones, leads to the conclusion that economic development brings down the size of the family; the evidence from studies dealing with the economic consequences of family size indicates that the small family is more conducive to the welfare of the people.

However, many of the studies dealing with the relationship between population and economic variables are based on aggregated observations for a country or a region as a whole, and they suffer from many limitations. Eva Mueller has drawn attention to some of these limitations. For example, such studies hide individual and group variation within the larger universes, fail to distinguish between influences on fertility that operate at the community level and those which operate at the level of the individual household; they do not bring out the relative importance of the group norms and individual attitudes, fail to establish the cause and effect relationship between correlated variables and also fail to take into account a sufficient number of relevant variables, especially the attitudinal and motivational ones (Mueller, 1975: 342–43). Yet it is precisely the type of knowledge which escapes the net of aggregative studies which is essential for the formulation of policies on population and development.

There are also serious discrepancies even in the major findings of the aggregative studies. For example, the negative relationship between population growth and economic development (Ryder, 1967) which is taken for granted with some supportive evidence (Heer, 1966: 423) has become questionable in view of the further evidence which shows that it is not the poorest developing countries which experience the most rapid population growth, but countries which manifest different levels of economic growth (Tabah, 1975b: 22–23).

The economic decision-making model cannot explain the fluctuations in the developed countries such as the steep decline in fertility during the Great Depression, the baby boom soon after World War II, and the present low rates of fertility in the Western countries. Even developing countries are known to behave contrary to the pattern predicted from this theory. For example, the remarkable rise in the birth rate in Cuba in the 1960s is attributed to the economic development that followed the revolution, and its precipitous decline, in the 1970s, to a deterioration in the country's economic situation (Diaz-Briquets and Perez, 1982).

Yet another shortcoming of the available studies is that most of them deal with the subject matter mainly from the perspectives of the disciplines of demography and economics. But there is a growing recognition that the perspectives of many more disciplines should be brought to bear on the subject matter for a better understanding of the problems involved.

Special Features of this Study

An attempt has been made in this investigation to take note of some of the shortcomings of the studies pointed out earlier and to gain from that knowledge. With a view to make good some of the deficiencies of the aggregative studies, this study is conducted on the micro level, selecting three large villages, so that it is possible to distinguish between the changes at the community level and at the individual and group levels. It views the subject matter from the perspectives of three disciplines—demography, economics and sociology—thus introducing new variables into the analytical model. An attempt is also made at unravelling the cause and effect relationships among the crucial variables.

In the economic decision-making models about fertility control, income is taken to be the key economic variable, and the causes and consequences of family size are generally analysed in terms of income. Apart from the difficulties involved in obtaining accurate information about income, especially from people working in the informal sector of the economy such as the cultivators, income does not characterise one's significant economic situation. Between two persons in the same income bracket one may be more satisfied with his lot than the other. One's economic adjustment rather than one's income would be a better indicator of one's economic situation. Therefore, in this study, inter-generational mobility of a person which is an indicator of economic adjustment has been adopted as the key economic variable for analysing fertility behaviour. It is obvious that between two persons in the same income bracket, the one who has experienced upward mobility would be a better adjusted person than the other who has experienced downward mobility and consequently their attitudinal and behaviour patterns would be different.

Again, in the studies based on aggregated observations, the measure of income itself has been used as an index of economic development, but in this study economic development is measured in terms of a sectoral and occupational transformation of the economy. Such a conception of economic development enables one to study the opportunities availed of by different persons in the new economy, which will have a bearing on their fertility behaviour.

The most problematic aspect of the economic decision-making models of fertility behaviour is their underlying assumption that the parents regard their children as durable consumer goods. This assumption has, no doubt, been challenged and a contrary view has been emphasised that the motivation for child-bearing is affective rather than economic and the family values predominate over economic rationality (Blake, 1968). There is also a point of view which assumes that the economic motivation for child-bearing is more true of the developing societies (and of the developed societies before achieving the demographic transition) whereas the developed societies at present are characterised more by the affective motive (Tabah, 1980: 362). On the other hand, those who have pondered over the demographic transition in the developed countries have come to the conclusion that even in their case, the decline in fertility prior to achieving demographic transition was affectively motivated; the parents were motivated to have fewer children with a view to ensure a better future for their children rather than to maintain their own status and security (Aries, 1980: 646–47; Keyfitz, 1982: 731).

Perhaps in reality both utilitarian and affective motives would be involved in child-bearing. Only the degrees in which they combine would vary from parents to parents, from society to society and, in the same society, from time to time.

The Selection of the Study Area

The selection of the study area is guided by the two basic features of the investigation, namely, it is an exploratory study and it is conducted at the micro level. It is confined to the rural communities in which the processes of economic change are easier to fathom. The study villages are chosen from the states of Punjab and Haryana which represent that region of India which was the first to experience a transformation in its rural economy, popularly known as the Green Revolution. This region (with the highest per capita income in India) has already caught up in economic development. By and large, scholars who are concerned with the problems of the relationship between economic development and population growth in India have also confined their attention to this region.

The three villages have been so chosen as to encompass as much diversity as possible within a broad cultural setting. The villages are located in three different districts—two from Punjab and one from Haryana. Although the number of study villages and the states and the districts of their location were decided arbitrarily, keeping in view the requirements of the study, the villages themselves were carefully selected on the basis of four important criteria:

1. The villages should be large enough, say, with a population of over 4,000, so as to be capable of revealing a wide variety of changes.
2. They should be outside the zone of influence of the nearest town and city. A distance of 10 kms from the nearest town and 25 kms from the nearest city was considered adequate to meet this requirement.
3. The population growth rates during the past three decades should be consistently high or consistently low as compared with the average growth rates of their respective districts and states.
4. Their economy should be predominantly agricultural so that at least two-thirds of its workers are engaged in the agricultural sector.

Ultimately two villages, one from Punjab (Ghagga) and the other from Haryana (Ugala) were chosen for their excessively high rates of growth of population during 1951–61, 1961–71 and 1971–81. One village from Punjab (Ghudani Kalan) was chosen for its excessively low rates.

The principal data of the study were gathered from a 33 per cent sample of households drawn according to the procedures of simple random sampling, from every village. House-lists prepared for the 1981 census operations were used as the sampling frames and the census household was considered as the sample unit. The field investigation was conducted between May to September 1980. The sampling frame and the sample size for the three selected villages are given in Table 1.

Table 1

Sampling Frame and Sample Size in the Three Villages

Village	*District*	*State*	*Number of Households Constituting the Sampling Frame*	*Sample Size of Households*
Ghagga	Patiala	Punjab	770	254
Ghudani Kalan	Ludhiana	Punjab	741	252
Ugala	Ambala	Haryana	598	200

2

Socio-Economic Infrastructure of the Study Villages

A brief description of the variables of the socio-economic infrastructure would serve as a useful backdrop for the presentation of the data from our sample survey. This description is mainly based on information culled from records and secondary sources. With a view to giving a comparative picture, the infrastructural variables in the three villages are described under various headings and a synoptic view is provided in Table 1.

Location and Population

As pointed out earlier, the three villages were chosen so as to be relatively distant from the nearest town and city, and to be relatively large in population. Accordingly, Ugala is 14 kms from the nearest town, Shahabad, and 34 kms from the nearest city, Ambala (U.A.). Ghagga is at a distance of 19 kms from the nearest town, Samana, and 45 kms from the nearest city, Patiala; and Ghudani Kalan is at a distance of 20 kms from the nearest town, Khanna, and 42 kms from the nearest city, Ludhiana. There is, however, a small urban centre, Payal, more or less the same size as Ghudani Kalan, which is situated only 5 kms from the latter. It was declared as a municipality after 1971 but it has hardly any influence ever Ghudani Kalan.

Besides transportation, each village is also telephonically linked to the towns. However, there is only one telephone (that installed in the post office) in Ugala. Ghudani Kalan has about six telephone lines. But Ghagga, besides 14 telephone lines, also has a telephone exchange.

According to the house-lists prepared in 1980 for the census of 1981, the population of Ugala, Ghagga and Ghudani Kalan were 4,800, 5,143 and 4,380 respectively. Though all the three villages are large, Ghagga is the largest and Ghudani Kalan is the smallest among them.

Land and Agriculture

Agriculture is the mainstay of the economy in all the three villages and land is an important resource. The land under all uses in Ugala, Ghagga and Ghudani Kalan is 3,511, 4,477 and 3,750 acres respectively, which shows marked variation. The variation is much less in respect of cultivated land which is 3,464, 3,500 and 3,419 acres respectively. In Ghagga, where there is a relatively greater difference between total area and the area under cultivation, about 220 acres are lying as cultivable waste. The per capita cultivable land in Ugala, Ghagga and Ghudani Kalan works out to 0.72, 0.68 and 0.78 acre respectively.

As a result of agricultural development in recent years, land has been put to multiple cropping. The average cropping intensity for a decade (from 1970–79) in Ugala, Ghagga and Ghudani Kalan was 1.60, 1.78 and 1.65 respectively. It may be pointed out that in Ghagga, where the per capita cultivable land is the lowest, the cropping intensity is the highest.

There are also a number of other indices of agricultural development among which the availability of irrigation facilities and mechanical appliances may be considered. In all the three villages there are a large number of tubewells. Besides the tubewells, Ghagga and Ghudani Kalan are provided with canal irrigation; but canal water is more plentiful in the latter than in the former. Thus, in respect of irrigation facilities, of the three, Ghudani Kalan is the most endowed village and Ugala the least endowed.

Administration

All the three villages have been in existence for a long time although not much evidence of historical importance is available. However, in Ghagga there was a rest house, now used as a police station, which was built by the Maharaja of Patiala about eighty years ago. The village itself is reported to have been first inhabited by a Jat family belonging to the Dhillon clan, some 400 years ago. Ghudani Kalan seems to have had a greater historical past and importance. The village was attacked and destroyed by Muhammad Tuglak in

A.D. 1358, but was reestablished soon after by the Goparai family. The seventh Sikh Guru, Guru Hargobind Singh, visited the village in A.D. 1623 and the event has been commemorated by building a Gurudwara in his name.

All the three villages had a substantial proportion of Muslim population which was depleted after the partition in 1947. At present, there is only a sprinkling of Muslim families in all the villages.

With the inception of village self-government after independence, panchayats were established in the villages in 1952. Starting with five members, the strength of the panchayat members has expanded in step with the growth of population; the latest elected panchayats had 9 members in Ugala and 10 members each in Ghagga and Ghudani Kalan. The annual income of the panchayats in Ugala, Ghagga and Ghudani Kalan in 1980 were Rs 30,000, Rs 45,000 and Rs 26,000 respectively.

In 1978 Ghagga was recognised by the Punjab government as an urban centre and its panchayat was replaced by a Notified Area Committee (NAC). The villagers, however, have resisted the move and have taken the matter to the High Court.

With the setting up of the NAC, Ghagga has been better equipped in respect of administration. It also has a police station whereas Ugala and Ghudani Kalan are served by the nearby police stations located at Barara and Payal respectively.

Facilities for Health and Family Welfare

Public medical facilities in the rural areas in Haryana and Punjab are organised through the primary health centres (PHC), rural dispensaries and ayurvedic dispensaries and their sub-centres. The PHCs are usually located in the Block headquarters and the rural and ayurvedic dispensaries cater to groups of villages. Only PHCs and rural dispensaries have professionally qualified doctors. The ayurvedic dispensaries are run by ayurvedic medical practitioners known as the *vaids*. The sub-centre of a rural dispensary is run by a paramedical person designated as an auxiliary nurse and midwife (ANM) who is assisted by a local midwife (*dai*).

The public health facilities in all the three villages are coordinated by PHCs located outside the village. The PHC responsible for Ugala is located at Mulana which is at a distance of 15 kms. The nearest rural dispensary is in Barara, 7 kms away. The only health facility located in the village is a rural sub-centre run by an ANM with the help of a *dai*. A doctor from the rural dispensary pays irregular visits. The ANM is expected to conduct deliveries, provide maternity and child health (MCH) services, and survey the eligible couples for the family planning programme. A malaria worker visits the village regularly; he tests blood samples of patients for malaria and keeps a record of the incidence of this disease. Other than the government health facilities, there are eight private medical practitioners, none of whom is a fully qualified doctor; they possess the certificate of registered medical practitioner (RMP). The nearest hospital is at Shahabad which is 14 kms away.

The PHC taking care of Ghagga is located at Satrana 15 kms away and the nearest rural dispensary is at Patran, 11 kms away. The village, however, has an ayurvedic dispensary headed by a *vaid*, and a sub-centre of the rural dispensary; the latter has ceased to function since 1978 when the ANM was transferred. There is a malaria worker stationed in the village, who surveys the incidence of malaria. Besides these facilities the village is served by seven private medical practitioners who are not fully qualified.

In the absence of the ANM, the villagers have to take their delivery cases to relatively distant places such as Samana (which is 19 kms away) and Patiala (45 kms away).

Relatively, Ghudani Kalan is better provided with health care facilities. The PHC responsible for this village is located at Payal, barely 5 kms away. There is a rural dispensary and an ayurvedic dispensary besides a sub-centre located in the village itself. The rural dispensary is headed by a fully qualified doctor who is assisted by an ANM and other paramedical staff. The ayurvedic dispensary is looked after by a *vaid*. A malaria worker visits the village regularly. Among the seven private medical practitioners who are serving the village besides the government medical personnel, there are two fully qualified doctors. Thus, in every respect, Ghudani Kalan has superior medical facilities as compared with the other two villages.

Educational Facilities

In all the villages there is provision in schools for studying up to matriculation. Schools are run by the state governments. However, the high school in Ghudani Kalan has been in existence for a longer time (since 1959) as compared with the other two villages; prior to 1959 there was a middle school run privately. Ugala and Ghagga had only primary schools before their school systems were upgraded to the high school level in 1961 and 1965 respectively. Ghudani Kalan and Ghagga are also accessible to colleges which are situated at a distance of 2 kms and 5 kms respectively. On the whole it would appear that the educational facilities are better in Ghudani Kalan as compared with the other two villages.

Trade, Industry and Commerce

The village economy is based principally on agriculture. Its development would obviously imply the growth and development of agriculture. But a higher order of growth would also depend upon a sectoral transformation so that the non-agricultural sectors begin to contribute more and more. The growth of trade, commerce and industry in a village would, therefore, be important indicators of its economic development.

Large villages, such as the ones we are dealing with, could not but have given rise to a number of shops to cater to the daily shopping needs of the villagers. But there is a considerable variation in the size and pattern of the marketing facilities in the three villages.

The market is the smallest and the shops are most scattered in Ghudani Kalan. There are in all 22 shops—almost all of them are small and cater to the needs of the villagers only. Seven of the shops are clustered around the bus stop. For major purchases the villagers go to Khanna town.

The market in Ugala also is of a modest size and somewhat scattered. However, most of the shops are located near the bus stop which is just on the periphery of the village. In all there are 30 shops. But there are three large shops of commission agents. By and large, as in Ghudani Kalan, the market in Ugala serves its residents only. But there is a tendency for the market to be centralised and to grow. There is a bigger shopping centre at Barara which is 7 kms away and which is frequented by the villagers.

The market at Ghagga is highly developed and serves as a shopping centre for the people of the surrounding villages besides its own residents. There are nearly a hundred shops most of which are situated along the main road near the bus stand, close to the village. Ten shops belong to wholesale commission agents and there are ten

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workshops. It is the growth of the market which has turned the village into an urban centre.

Ugala and Ghagga have milk collection centres which were started around 1975. A number of families (especially those belonging to the poorer sections) keep milch cattle and sell milk to the centre. The scheme is working more successfully in Ugala.

Industry is not well developed in any one of these villages. However, Ghagga has a fairly large rice mill employing 40 persons and Ugala has a crusher for sugarcane, both of which are operated seasonally. Incidentally, the owners as well as the employees of the rice mill at Ghagga do not reside in the village.

An important cottage industry which is found in all the three villages is poultry farming. Ugala, Ghagga and Ghudani Kalan have 3, 4 and 12 poultry farms respectively; Ghudani Kalan also has four piggeries.

All the three villages are well provided with banking facilities and every village has branch offices of two banks. In Ugala, banking activities were started in 1970 when a branch of the District Cooperative Bank was opened; most of the villagers, both farmers and non-farmers, are members of the cooperative society run by this bank. The cooperative society, besides providing credit facilities, also arranges to sell essential articles such as sugar, cloth and fertilisers. The Central Bank of India opened a branch office in the village in 1975. It provides credit facilities to the villagers under the various government schemes at subsidised rates of interest. There are, in all, 1,054 savings accounts opened by the villagers and the fixed deposits amount to about 14 lakh rupees. Although the villagers are eager to take loans from the bank they are reluctant to make repayments. The recovery of the loans by the bank is only about 40 per cent.

The banking facilities in Ghagga were introduced much earlier as a branch of a District Cooperative Bank was opened in 1957. The cooperative society linked with this bank also sells essential goods to the villagers besides providing credit facilities. The second bank, a branch of the Punjab and Sind Bank, was opened in 1970. There are about 1,700 savings accounts in this bank opened by the villagers and the fixed deposits are about 9 lakh rupees.

In Ghudani Kalan, too, banking operations were introduced quite early, a branch of the District Cooperative Bank having been opened in 1958. At present, the cooperative bank and society situated in the village serve three other neighbouring villages also. The other bank in the village is a branch of the United Commercial Bank. It has 1,600 savings accounts and fixed deposits amounting to 29 lakh rupees. The recovery rate of loans is from 85 to 100 per cent. Thus banking operations seem to be highly successful in this village.

On an overall assessment of the socio-economic variables in the three villages it would appear that Ghagga and Ghudani Kalan are more developed than Ugala. In this respect the two rapidly growing villages with regard to population (namely Ugala and Ghagga) are farther apart in terms of some of the indices of development. However, the greater development of Ghagga and Ghudani Kalan is along different variables; Ghagga is more developed in respect of transportation and communication, administrative structure and trade and commerce, whereas Ghudani Kalan is more advanced in agriculture and health and educational facilities. In their development, Ghagga is acquiring urban characteristics whereas Ghudani Kalan persists in its rural character but with improved amenities of life. Ugala, which is relatively the least developed, comes in-between the other two villages in the rural-urban continuum.

Table 1

A Synoptic View of the Infrastructural Variables in Ugala, Ghagga and Ghudani Kalan

Variable	*Ugala*	*Ghagga*	*Ghudani Kalan*
1 Location			
(*a*) Tehsil	Ambala	Samana	Khanna
(*b*) District	Ambala	Patiala	Ludhiana
(*c*) State	Haryana	Punjab	Punjab
2 Nearest urban centre and its distance from the village			
(*a*) Town	Shahbad (14 kms)	Samana (19 kms)	Khanna (20 kms)
(*b*) City	Ambala (34 kms)	Patiala (45 kms)	Ludhiana (42 kms)
3 Road links	Linked with Shahbad and Barara	Linked with Samana and Patran	Linked with Khanna and Doraha
4 Bus service	Infrequent	Very frequent	Frequent
5 Communication			
(*a*) Post office	Sub-post office	Post office	Post office
(*b*) Telephone	1 line	Telephone exchange with 14 lines	6 lines

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Table 1 (*contd.*)

Variable	*Ugala*	*Ghagga*	*Ghudani Kalan*
6 Population (1980)	4,800	5,143	4,380
7 Land area (acres)	3,511	4,477	3,750
8 Agriculture			
(*a*) Cultivated area (acres)	3,464	3,500	3,419
(*b*) Per capita cultivated land (acres)	0.72	0.68	0.78
Cropping intensity (average for 10 years: 1970–79)	1.60	1.78	1.65
9 Source of irrigation			
(*a*) Number of tubewells	253	272	293
(*b*) Canal-system	No	Yes	Yes
10 Panchayat activities			
(*a*) Number of members in panchayat	9	10	10
(*b*) Annual income of panchayat (Rs)	30,000	45,000	26,000
11 Health and family planning facilities			
(*a*) Facilities available in the village	One sub-centre	One sub-centre (closed since 1978) and one ayurvedic dispensary	One rural dispensary, one ayurvedic dispensary and one sub-centre
(*b*) Nearest			
Rural dispensary	Barara (7 kms)	Patran (5 kms)	In the village
PHC	Mulana (15 kms)	Satrana (15 kms)	Payal (5 kms)
Hospital	Shahbad (14 kms)	Samana (19 kms)	Khanna (20 kms)
(*c*) Number of private medical practitioners	8	7	7 (including two qualified MBBS doctors)
12 Educational facilities			
(*a*) Number of primary schools	2	1	1
(*b*) Number of high schools	1	1	1
(*c*) Nearest degree college	Shahbad (14 kms)	Patran (5 kms)	Rara Sahib (3 kms)

Table 1 (*contd.*)

Variable	*Ugala*	*Ghagga*	*Ghudani Kalan*
13 Trade, industry and commerce			
(*a*) Market	Modest market with 30 shops	Well developed market with 100 shops	No regular market but 22 small shops scattered all over
(*b*) Milk collection centre	Started in 1975—working successfully	Started in 1975 but not very successful	None
(*c*) Large or medium industry	None	One rice mill	None
(*d*) Cottage industry			
Poultry farms	3	4	12
Sugar-cane crusher	1	—	—
Piggeries	—	—	4
14 Banking			
(*a*) Date of establishment of cooperative bank	1970	1957	1958
(*b*) Nationalised bank and year of opening	Central Bank of India (1975)	Punjab & Sind Bank (1970)	United Commercial Bank (1971)
(*c*) Number of savings accounts in the nationalised bank	1,054	1,700	1,600
(*d*) Fixed deposits in the nationalised bank (Rs)	14 lakhs	9 lakhs	29 lakhs

3

Socio-Economic Background and Living Conditions

In this chapter I shall compare the three villages with regard to the socio-economic background and living conditions of the people. These will be represented by the variables of (*a*) the pattern of distribution of landownership, (*b*) the pattern of distribution of workers in the various industrial categories of occupations, (*c*) the pattern of distribution of workers in the various categories of occupational prestige, and (*d*) the pattern of distribution of households according to scores on an index of level of living.

Landownership

Cultivable land is the mainstay of the village economy which depends upon agriculture to a large extent. It has already been pointed out that all the three villages have more or less the same area of cultivated land although their population as well as growth rates vary. Therefore, the pattern of distribution of land would also vary. That this is indeed so can be seen from Table 1 which gives the relevant information.

First, with regard to the percentage of households not owning land, there is a striking contrast between Ghagga, on the one hand (where about 60 per cent of the households do not possess any cultivated land), and Ugala and Ghudani Kalan, on the other (where only about 48 per cent of the households do not own land in each village). However, between Ugala and Ghudani Kalan, the former is better placed in terms of the average land owned, taking into account either all the households or only the landowning households. In respect of the average holding of only the landowning households, Ghagga occupies the intermediate position although when all the households are considered, it occupies the last position.

The average size of the land cultivated by the cultivating house-

Table 1
Landholdings of Heads of Households in the Three Villages

Size of Landholding (Acres)	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	Number of Households	*%*	*Number of Households*	*%*	*Number of Households*	*%*
Nil	97	48.50	154	60.63	121	48.21
1–3	31	15.50	28	11.02	49	19.52
4–6	25	12.50	25	9.84	37	14.74
7–9	11	5.50	16	6.30	13	5.18
10–12	10	5.00	8	3.15	16	6.37
13–15	4	2.00	6	2.36	3	1.20
16–20	7	3.50	10	3.94	6	2.39
21–25	10	5.00	4	1.58	4	1.59
26–30	1	0.50	2	0.79	2	0.80
31–40	1	0.50	1	0.39	—	—
41–50	3	1.50	—	—	—	—
TOTAL	200	100	254	100	251	100
Average (all households)		5.24		3.52		3.69
Average (all landowners)		10.18		8.95		7.12
Average land cultivated (all cultivating households)		11.80		9.21		8.72

holds in all the villages is consistently larger than the average holding of the landowning families, which indicates that there is some degree of leasing of land. However, as it is with regard to the average holding of landowning households so it is with regard to the average size of the cultivated land among the cultivating households—Ugala occupies the leading position and Ghudani Kalan the last.

Thus, viewed from any angle Ugala occupies a pre-eminent position in terms of landownership status of the households. On the other hand, it must be kept in view that Ghagga and Ghudani Kalan have better irrigation facilities as they are also fed by canal water.

Patterns of Distribution of Workers in Industrial Categories

One of the major indicators of economic development is the sectoral transformation of the economy. In the case of the rural communities (such as the villages under study), sectoral transformation would be represented by an increase in the proportion of the non-agricultural occupations. The trend in this kind of change could be broadly guaged from an examination of the distribution of workers in the various industrial classifications. We have the relevant information for 1961, 1971 and 1980; information for the first two periods has been obtained from our sample survey. However, the information for 1980 is an estimate from a 33.33 per cent sample whereas the census figures refer to the total universe. Therefore, in making comparisons, the possibility of sampling error in the case of the data for 1980 should be borne in mind. Data are presented in Table 2.

Table 2

Percentage Distribution of Total Workers in the Three Villages according to the National Industrial Classification of Workers for 1961, 1971 and 1980

Percentage of Workers / *Industrial Categories*	*Ugala*			*Ghagga*			*Ghudani Kalan*		
	1961	*1971*	*1980**	*1961*	*1971*	*1980**	*1961*	*1971*	*1980**
Cultivators	42.36	42.26	44.35	53.88	49.65	38.45	56.63	52.39	52.19
Agricultural labourers	4.52	23.01	22.87	8.58	30.09	32.92	13.53	23.48	17.32
Livestock/forestry/ others	0.27	0.65	—	0.20	0.43	—	4.75	0.80	—
Household industry	23.90	9.46	8.06	18.97	2.97	2.25	8.15	6.85	3.51
Manufacturing, other than household industry	0.27	2.69	1.65	1.51	2.26	—	2.15	0.64	0.22
Construction	0.53	0.10	4.41	1.62	0.61	1.64	0.72	0.64	4.17
Trade and commerce	7.30	7.85	7.71	6.66	8.00	12.68	4.21	3.11	6.58
Transport/storage/ communication	1.33	1.72	0.28	—	0.70	0.82	0.18	1.04	0.22
Other services	19.52	12.26	12.67	8.58	5.30	11.24	9.68	11.07	15.79
TOTAL NUMBER (equal to 100 per cent)	753	930	1089	991	1150	1467	1116	1256	1363

* Estimate based on 33.33 percentage sample of the households.

Apart from the sampling error another point which needs to be kept in mind in interpreting the changing pattern of distribution in the various industrial categories is the fluctuation of women workers (shown in Table 3). For instance, there was a marked decline of women workers in Ugala from 1961 when they constituted 14.48 per cent of the total working force, to 1971 when this percentage was reduced to only 2.26. A second instance of marked fluctuation, though in a different direction, has occurred in Ghagga; the relevant percentage (which was only 1.56 in 1971) had shot up to 9.20 in 1980. Yet another complicating factor in our interpretation is the fact that not all the workers are engaged in work within the village itself. Some of them commute to places of work outside the village. Workers commuting into the village are not shown in the Table.

Table 3

Percentage of Women Workers in the Working Force in the Three Villages in 1961, 1971 and 1981

	1961	*1971*	*1981*
Ugala	14.48	2.26	4.96
Ghagga	3.63	1.56	9.20
Ghudani Kalan	4.57	2.23	3.73

Coming back to Table 2 (which shall now be our major focus), we may first consider the trend of change in the primary sector—which includes (*i*) cultivators, (*ii*) agricultural labourers and (*iii*) workers dealing with livestock, forestry, etc. The number of cultivators have increased in all the villages, but more markedly in some cases (not shown in the Table). There have been sharp increases in the number of cultivators in Ugala and Ghudani Kalan between 1971–80. But these fluctuations have not affected the relative proportion of cultivators in the working force to the same extent because of a rise in the total working force as a result of population growth. By the same token, when the number of cultivators has increased marginally from decade to decade their relative proportion in the working force has declined very sharply, as for instance in the case of Ghagga from 1971 to 1980 and in the case of Ghudani Kalan from 1961 to 1971.

The situation with regard to agricultural labourers is quite different to that of the cultivators. In all the three villages there was a sharp rise in the number as well as percentage of agricultural labourers in the working force. This rise, however, was relatively less steep in Ghudani Kalan because it had a relatively higher base in 1961. Between 1971 and 1980, the situation of agricultural labourers presents different pictures in these three villages. In Ugala the number has increased slightly (not shown in the Table) but the percentage has marginally declined. In Ghagga the number

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has increased sharply from 346 to 507 and the percentage has also increased appreciably. On the other hand, in Ghudani Kalan the number as well as the percentage have decreased markedly.

Workers dealing exclusively with livestock, etc., have been negligible in all the villages at all times except in Ghudani Kalan in 1961; there was a sharp decline subsequently.

The change in the fourth industrial category (namely, workers in household industries), manifests a trend which is in sharp contrast with that observed in the case of agricultural labourers. Whereas the percentage in the case of the agricultural labourers rose sharply from 1961 to 1971, it declined equally sharply in the case of workers in household industries during the same period. The drop was especially sharp in Ugala and Ghagga which had a high percentage of workers in household industries in 1961; on the other hand, Ghudani Kalan, where the base was rather low in 1961, the decline was less remarkable. From 1971 to 1980 the percentage of workers in household industries has shown a consistent decline in all the villages.

Although the household industries have been virtually wiped out, their place has not been filled by the manufacturing industries (other than household industries) in any of the villages.

Only a negligible percentage of workers are engaged in construction, but in 1980 this percentage achieved significance in Ugala and Ghudani Kalan.

The percentage of workers in the industrial category of trade and commerce has shown different trends in the different villages. In Ugala the percentage (which is quite substantial) has remained almost the same over the decades; in Ghagga it has increased consistently and in 1980 it has surpassed the figures of the other two villages. This percentage has been fluctuating in Ghudani Kalan where it is far lower than in the other two villages.

The workers in the category of other services are substantial in all the villages. But the percentage in Ugala, which was quite large in 1961, came down considerably in 1971 and had remained constant in 1980. It has been fluctuating in Ghagga and reached its peak in 1980. This percentage was the highest among the three villages in Ghudani Kalan in 1980 (where it had been rising consisently since 1961). It has been observed in Chapter 2 that health and education facilities were much better in this village as compared with the other two villages. Moreover, a relatively larger number of people in this category in Ghudani Kalan commute for work to outside places.

Having discussed the trends of change in the various sectors of the economy, it is easier to discern some inter-sectoral changes that have taken place in the village.

Agriculture is still important in all the three villages—in every village the single largest percentage of workers are cultivators. The importance of agriculture in the village economy has been greatly reduced in Ghagga. However, the percentage of workers depending upon agriculture (namely, the cultivators and the agricultural labourers together) is very high in every village. In 1980 this percentage actually increased considerely in Ugala and Ghagga as compared with 1961, while it was about the same in Ghudani Kalan at both points of time.

The rise in the degree of dependence on agriculture in Ugala and Ghagga is a direct consequence of the decline in household industries. It is obvious that the workers released from this sector have swelled the ranks of agricultural labourers, which has created an alarming situation in Ghagga where agricultural labourers constitute one-third of the total working force.

None of the villages is showing any recovery in the industrial sector. The other two major sectors with a potential for bringing about a sectoral transformation are (*a*) trade and commerce, and (*b*) other services. The workers in the other services in all the three villages are just adequate for servicing their own population. The relatively larger percentage in this category in Ghudani Kalan (as pointed out earlier) is due to a relatively large proportion of commuters from this category to outside places of work. All the same, one may say that Ghudani Kalan is poised for a transformation in its service sector.

In the trade and commerce sector, too, the workers in Ugala and Ghudani Kalan are barely sufficient to cater for the village population. Only in Ghagga is the percentage of workers quite substantial and much greater than what the residents of the village require. In fact, Ghagga has been developing as a trade centre for the surrounding villages. Here, then, there is a substantial transformation of the economy taking place; the commercial sector is competing with the agricultural sector for predominance. The consistent growth in the percentage of workers in this sector, and the consistent decline in the percentage of cultivators over the decades, is a clear indication that in time agriculture will occupy a subordinate position in the economy of this village.

A comparison between the landownership pattern and the pattern of distribution of workers in industrial categories would show some consistent relationships. First, in Ghagga (which is developing as a trade centre) the percentage of landowning households is the smallest. Between Ugala and Ghudani Kalan, each of which has almost the same percentage of landowning households, Ghudani Kalan has a greater percentage of cultivators. Moreover the average size of landholdings is also smaller in Ghudani Kalan. These differences corroborate the fact that the percentage of agricultural labourers is far smaller in Ghudani Kalan than in Ugala; smaller landholdings with a larger number of cultivators obviously provide less scope for employing hired labour.

In Ghagga, where there is an extremely high percentage of agricultural labourers, the intensity of cultivation is the highest. Also the agricultural labourers here, unlike in the other villages, comprise a relatively large proportion of women (113 women in a total of 507 labourers) who are mainly seasonal workers.

Comparison by Occupational Types and Prestige

In economic development people usually strive for wealth, status and power. Perhaps the most significant variable in which all these values are reflected is occupational prestige. An attempt has been made in this survey to rank the various occupations in the villages, according to their prestige, by obtaining the opinion of a section of the sample. For purposes of refinement some of the occupations with a greater range of prestige variation (such as agricultural and trading occupations) have been sub-divided into more precise types. Agricultural occupations have been sub-divided into types such as large farmers (with more than 25 acres of land), medium farmers (with 10 and 25 acres of land), small farmers (with less than 10 acres of land), share-croppers and agricultural labourers. Similarly, the trading occupations have been sub-classified as wholesalers, medium shopkeepers and petty shopkeepers. There are also sub-divisions of occupations in medical care, teaching and ownership of industries. After determining their rank, the occupations have been subsumed under seven broad prestige categories.

In making a comparison between the villages with respect to the occupational prestige of their residents, it is important to bear in mind that not all the workers participate in the economy of the village only. Some of them work outside the village. On the other hand, the percentage of workers gainfully employed outside the village to the total number of workers would vary from village to village. Accordingly in all the three villages there are workers who are employed outside the villages and their percentages to the total number of workers in Ugala, Ghagga and Ghudani Kalan are 4.3, 5.9 and 16.0 respectively. Thus the workers in Ghudani Kalan participate in the outside economy to a much larger extent as compared with the other two villages.

Just as there are workers living in the village but commuting to other places for work, there are outsiders commuting to the study villages for work. The percentage of commuting workers in the total working force within the villages is estimated to be 4.1, 4.0 and 4.6 in Ugala, Ghagga and Ghudani Kalan respectively. But their ratios to the residents commuting to outside places for work are 1.00, 0.70 and 0.43 in Ugala, Ghagga and Ghudani Kalan respectively, In other words, in Ugala there are as many workers coming into the village as there are persons living in the village but working outside. On the other hand, in Ghagga and Ghudani Kalan, more persons residing in the village are working outside than outsiders working in the village, the difference being more marked in Ghudani Kalan.

However, in order to compare the villages with regard to the distribution of workers in the various occupational prestige categories, only workers residing in the village whether working within or outside the village are considered. The relevant information is presented in Tables 4a, b, c. The persons working outside the village are separately indicated in the tables.

In every village there is a wide variety and a number of occupations. In Ugala and Ghudani Kalan there are 26 different types of occupations each, and in Ghagga 25. Actually the number of precise types of occupations in every village is much larger since some of the related occupations are grouped together in some of the types given in the Table. However, only in Ghudani Kalan are all the seven broad occupational prestige categories represented; no occupation belonging to the highest category is found either in Ugala or Ghagga. But only two occupations in this category, one of a doctor and the other of a lawyer, are found in Ghudani Kalan and those too belong to persons who commute to outside places of work.

Another notable feature of occupational distribution is that in Ghudani Kalan, as compared with the other two villages, there is a greater percentage of workers who are teachers but all of them

Table 4a

Distribution of Workers in Ugala according to Occupational Prestige

Prestige Category and Occupation	*Number of Workers*	*%*	*Number Working Outside*
Category I			
Doctor (MBBS)	—	—	—
Lawyer	—	—	—
TOTAL			
Category II			
Bank manager	—	—	—
Wholesaler	4	1.10	1
Junior government officer	1	0.28	—
Large farmer	16	4.40	—
TOTAL	21	5.79	1
Category III			
Registered medical practitioner	5	1.38	—
Transporter	1	0.28	1
Goldsmith	3	0.83	—
Flour miller	2	0.55	—
TOTAL	11	3.03	1
Category IV			
Medium shopkeeper	16	4.40	—
School teacher	8	2.20	2
Medium farmer	53	14.60	—
TOTAL	77	21.21	2
Category V			
Mechanic/electrician	5	1.38	—
Priest	—	—	—
Carpenter/blacksmith	3	0.83	—
Petty shopkeeper	9	2.48	—
Small farmer	89	24.52	—
Clerical and related	7	1.93	4
Driver	3	0.83	2
TOTAL	116	31.96	6
Category VI			
Skilled worker	16	4.40	1
Salesman	3	0.83	—
Share-cropper	3	0.83	—
Police constable	7	1.93	3
TOTAL	29	7.99	4

Table 4a (*contd.*)

Prestige Category and Occupation	*Number of Workers*	*%*	*Number Working Outside*
Category VII			
Cobbler	13	3.58	—
Barber	4	1.10	—
Horse-cart driver	—	—	—
Watchman, peon	5	1.38	—
Domestic/shop servant	2	0.55	—
Sweeper	2	0.55	—
Agricultural labourer	83	22.86	1
TOTAL	109	30.02	1
GRAND TOTAL	363	100	15

Table 4b

Distribution of Workers in Ghagga according to Occupational Prestige

Prestige Category and Occupation	*Number of Workers*	*%*	*Number Working Outside*
Category I			
Doctor (MBBS)	—	—	—
Lawyer	—	—	—
TOTAL			
Category II			
Bank manager	2	0.41	—
Wholesaler	4	0.82	—
Junior government officer	—	—	—
Large farmer	6	1.23	—
TOTAL	12	2.45	—
Category III			
Registered medical practitioner	3	0.61	—
Transporter	4	0.82	—
Goldsmith	1	0.20	4
Flour miller	—	—	—
TOTAL	8	1.64	4
Category IV			
Medium shopkeeper	27	5.52	—
School teacher	10	2.04	5
Medium farmer	58	11.85	—
TOTAL	95	19.43	5

Table 4b (*contd.*)

Prestige Category and Occupation	*Number of Workers*	*%*	*Number Working Outside*
Category V			
Mechanic/electrician	7	1.43	1
Priest	—	—	—
Carpenter/blacksmith	9	1.84	—
Petty shopkeeper	29	5.93	1
Small farmer	92	18.81	—
Clerical and related	8	1.64	5
Driver	7	1.43	5
TOTAL	152	13.08	12
Category VI			
Skilled worker	8	1.64	—
Salesman	2	0.41	—
Share-cropper	32	6.54	—
Police constable	7	1.43	5
TOTAL	49	10.02	5
Category VII			
Cobbler	—	—	—
Barber	2	0.41	—
Horse-cart driver	2	0.41	—
Watchman, peon	4	0.82	1
Domestic/shop servant	4	0.82	—
Sweeper	—	—	—
Agricultural labourer	161	32.94	—
TOTAL	173	35.38	1
GRAND TOTAL	489	100	27

Table 4c

Distribution of Workers in Ghudani Kalan according to Occupational Prestige

Prestige Category and Occupation	*Number of Workers*	*%*	*Number Working Outside*
Category I			
Doctor (MBBS)	1	0.22	1
Lawyer	1	0.22	1
TOTAL	2	0.44	2

Table 4c (*contd.*)

Prestige Category and Occupation	*Number of Workers*	*%*	*Number Working Outside*
Category II			
Bank manager	—	—	—
Wholesaler	2	0.44	2
Junior government officer	—	—	—
Large farmer	2	0.44	—
TOTAL	4	0.88	2
Category III			
Registered medical practitioner	4	0.88	3
Transporter	1	0.22	1
Goldsmith	—	—	—
Flour miller	1	0.22	—
TOTAL	6	1.32	4
Category IV			
Medium shopkeeper	2	0.44	2
School teacher	22	4.82	22
Medium farmer	72	15.78	—
TOTAL	96	21.05	24
Category V			
Mechanic/electrician	4	0.88	1
Priest	3	0.66	—
Carpenter/blacksmith	9	1.97	—
Petty shopkeeper	26	5.70	—
Small farmer	150	32.89	—
Clerical and related	11	2.41	9
Driver	9	1.97	8
TOTAL	212	46.49	18
Category VI			
Skilled worker	21	4.61	5
Salesman	—	—	—
Share-cropper	12	2.63	—
Police constable	4	0.88	4
TOTAL	37	8.11	9
Category VII			
Cobbler	7	1.54	—
Barber	3	0.66	—
Horse-cart driver	—	—	—
Watchman, peon	5	1.10	4
Domestic/shop servant	2	0.44	—
Sweeper	3	0.66	—
Agricultural labourer	79	17.32	—
TOTAL	99	21.71	4
GRAND TOTAL	456	100	63

commute to outside place of work. Also the sample of workers in Ghudani Kalan shows three persons working as full-time priests whereas none of the priests in the other two villages are in the sample, showing that religious activity is more deep-seated in Ghudani Kalan.

Agricultural occupations (including large farmers, medium farmers, small farmers, share-croppers and agricultural labourers) together constitute the largest proportion in every village. But the distribution of different types among these occupations varies in different villages—Ugala is distinguished by the existence of the relatively largest percentage of large farmers, Ghagga by the largest percentage of agricultural labourers and Ghudani Kalan by the largest percentage of small farmers.

It has already been pointed out that, in respect to trade, Ghagga is the most developed while Ghudani Kalan is the least. This is also confirmed by the peculiar distribution of different types of occupations in trade. Although among the workers in Ghudani Kalan there are two wholesalers and two medium shopkeepers, all of them have their business outside the village; all the traders operating inside the village are petty shopkeepers. On the other hand, in Ghagga traders are well represented in all the three different types of trading occupations.

An important distinguishing feature of the trading occupations as compared with the agricultural occupations is that whereas the workers in the latter category in all cases work only in the village of their residence, those in the former category commute in some cases. Tables 4a, 4b and 4c show some workers in the trading occupations in Ugala, Ghagga and Ghudani Kalan commuting to outside places of work. Conversely, there are a number of such workers who commute to every village of this study, from other places. Their total number (not shown in Tables 4a, b and c) in Ugala is made up of eight petty shopkeepers, in Ghagga 17 medium and one petty shopkeeper and in Ghudani Kalan three medium and four petty shopkeepers. Considering the fact that the information presented in Tables 4a, b and c refers to a 33.33 per cent sample, the traders commuting to the villages comprise 9.5, 10.3 and 9.0 per cent of the traders operating in Ugala, Ghagga and Ghudani Kalan respectively.

Finally, for an overall comparison of the distribution of occupational prestige in the three villages, attention may be focused on the sub-totals of occupations in the seven broad prestige categories. These are further summarised in Table 5. It can be seen that in the first three prestige categories taken together, Ugala has the largest percentage of workers compared with the other two villages owing largely to a higher concentration of large farmers; in the middle categories of IV and V taken together, Ghudani Kalan has the highest percentage; and in the last two categories taken together, Ghagga has the highest percentage.

Table 5

Percentage Distribution of Workers in the Three Villages in Broad Prestige Categories

Prestige Category	*Ugala*	*Ghagga*	*Ghudani Kalan*
I	—	—	0.44
II	5.79	2.45	0.88
III	3.03	1.64	1.32
I–III	8.82	4.09	2.64
IV	21.21	19.43	21.05
V	31.96	31.08	46.49
IV–V	53.17	50.51	67.54
VI	7.99	10.02	8.11
VII	30.02	35.38	21.71
VI–VII	38.01	45.40	29.82
TOTAL	100	100	100

Another index for overall comparison of occupational prestige may be derived by assigning scores 7 through 1 to prestige categories 1 through 7 respectively. The average occupational prestige scores derived in this manner for Ugala, Ghagga and Ghudani Kalan are 2.77, 2.49 and 2.77 respectively.

Thus the overall distribution of occupational prestige in Ugala and Ghudani Kalan is better than that in Ghagga; Ugala and Ghudani Kalan are equal in their average score although the patterns of distribution of occupational prestige are different in the two villages, the relatively higher concentration of occupations of higher prestige in Ugala is balanced in Ghudani Kalan by a relatively higher representation of occupations of the middle range of prestige and lower representation of the occupations of lower prestige.

Level of Living

The economic background of the households will ultimately be reflected in the level of living. In order to guage the level of living a coarse index has been prepared by taking into account seven items—type of house, number of living rooms, housing amenities, electricity supply, water supply, radio or television, and means of conveyance. The index score ranges from 0 through 7 with the increasing degree of level of living. The distribution of the households in the three villages, according to their scores on the index of level of living, is shown in Table 6.

Table 6
Distribution of Sample Households according to the Scores on the Level of Living Index in the Three Villages

Score on Level of Living Index	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	Number	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*
0	26	13.00	9	3.54	3	1.20
1	34	17.00	32	12.60	27	10.76
2	29	14.50	39	15.35	32	12.75
3	26	13.00	44	17.32	26	10.36
4	20	10.00	47	18.50	33	13.15
5	25	12.50	38	14.96	41	16.33
6	24	12.00	26	10.24	45	17.93
7	16	8.00	19	7.48	44	17.53
TOTAL	200	100	254	100	251	100
AVERAGE SCORE	3.16		3.58		4.32	

The level of living usually shows a high degree of relatedness with occupational prestige. But in the present case, Ugala and Ghudani Kalan (which have a near equal overall distribution of occupational prestige) show a different picture with regard to the average score on the index of level of living; the former has the lowest score and the latter the highest among the three villages. The difference may be attributed to the fact that in overall economic transformation, Ghudani Kalan, with a greater proportion of non-agricultural occupations followed by its residents, is at a higher stage of development.

The average score on the index of level of living is also higher in Ghagga than in Ugala although the average occupational prestige score in the former is less than that in the latter. Again it may be recalled that Ghagga is more advanced than Ugala in terms of economic transformation inasmuch as it is developing into a trade centre with its concomitants of growing urban characteristics.

To sum up, it may be concluded that as regards the landownership pattern, Ugala enjoys a better standing; with regard to economic transformation, Ghagga and Ghudani Kalan have made headway but in different directions; and with regard to occupational prestige as well as level of living, Ghudani Kalan is in the best position among the three villages.

4

Correlates of Differential Growth Rates of Population in the Study Villages

One of the major criteria in the purposive selection of the three villages was their abnormal population growth rate during the two inter-censal decades of 1951–61 and 1961–71. The villages of Ugala (Haryana) and Ghagga (Punjab) were chosen because population growth rates were far above the corresponding rates for the population of the respective districts (Ambala and Patiala) and the states in which they are located. The village of Ghudani Kalan was selected because the growth rate of its population was far lower than the corresponding rate for the population of the district (Ludhiana) and of the state in which it is located. As it turned out, the same abnormal trends of population growth rate in these villages continued during the 1971–81 decade also (see Table 1).

The contrasting population growth rates in the two sets of villages during a relatively long period of time makes it incumbent upon the researcher to investigate the causes of such trends. A descriptive study design (followed in this investigation) does not enable one to establish a cause and effect relationship between variables, but an attempt will be made to indicate the correlates of these contrasting rates of growth of population.

Extreme degrees of variation in population growth rates cannot be explained in terms of variations in the natural growth of population alone—although this may be one of the contributing factors. Other processes of inmigration and outmigration are more likely to be important contributing factors to the peculiar growth rates.

In this study, the heads of the households who were born outside the village and their household members (some of whom may have been born in the village) have been treated as inmigrants. The heads of households who were born in the village along with their household

Table 1

Population Trends in the Village, District and State during the Decades 1951–80

Population	*Ugala*			*Ghagga*			*Ghudani Kalan*		
	Village	*District*	*State*	*Village*	*District*	*State*	*Village*	*District*	*State*
1951	1855	678175	5659481	1540	727008	9157255		854032	9157255
1961	2572	885785	7590543	2823	959817	11135069	3710	1107310	11135069
1971	3575	1098405	10036808	3752	1212399	13551060	4110	1410168	13551060
1980/81	4800*	1400133	12850902	5143*	1561547	16669755	4380*	1804420	16669755
Growth Rates									
1951–61	38.65	30.61	34.12	83.31	32.02	21.59	—	29.66	21.59
1961–71	39.00	24.00	32.23	32.91	26.31	21.70	10.78	27.35	21.70
1971–80/81	34.27*	27.47	28.04	37.07*	28.80	23.01	6.57*	27.95	23.01

* Population statistics collected by the Census Department from the listing of houses in March 1980.

Table 2

Distribution of the Sample in the Three Villages according to Inmigrants, Original Residents, Households and Persons

Residence Status	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	Households	*Persons*	*Households*	*Persons*	*Households*	*Persons*
Original residents	115(59.00)	867(63.98)	153(60.24)	981(61.89)	240(95.62)	1502(96.47)
Inmigrants	85(41.00)	488(36.02)	101(39.76)	604(38.11)	11(4.38)	55(3.53)
TOTAL	200(100.00)	1355(100.00)	254(100.00)	1585(100.000)	251(100.00)	1557(100.00)

Note: Figures in brackets denote percentages.

members have been regarded as the original residents. Table 2 shows the distribution of the sample in the three villages in terms of the distinction between the original residents and the inmigrants. As expected, a large proportion of the households—about two-fifths in each of the two villages, Ugala and Ghagga, which show abnormally high rates of growth—belong to the category of inmigrants. In contrast to this, in Ghudani Kalan which shows abnormally low rates of population growth, the inmigrant category of households comprises only a negligible proportion, being 4.38 per cent of the total number of households; this too is in conformity with the growth rates in that village.

In Ugala and Ghagga, which have given shelter to large proportions of inmigrant households, the flow of inmigration has not been uniform over the decades (Table 3). 54 per cent of the migrant households in Ugala and about 56 per cent in Ghagga had come to the respective villages more than 20 years prior to this study. The next largest group of inmigrant households in Ugala, about 33 per cent, came about 10 or 20 years prior to our investigation. During the past 10 years the flow of migration was greatly reduced. On the other hand, in Ghagga, inmigrant families have been coming in almost an even flow during the past two decades although there has been a distinct rise during the five-year period preceding our study. These trends in Ugala and Ghagga are more or less reflected in the fluctuations in population growth rates in the respective villages (Table 1).

Table 3

Distribution of Heads of Households in the Sample according to the Time of Migration and Village

Time of Migration Prior to Investigation	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Less than 5 years	5	5.88	18	17.82	—	—
6 to 10 years	5	5.88	5	4.95	2	18.18
10 to 20 years	28	32.94	19	18.81	—	—
20 + years	46	54.12	56	55.45	9	81.82
Not recorded	1	1.18	3	2.97	—	—
TOTAL	85	100	101	100	11	100

A second likely factor in the abnormal growth rates, as was pointed out, may be the outmigration of people from the villages. It may be assumed that the low rate of growth in Ghudani Kalan is partly on account of a high proportion of outmigration of the people from the village. Conversely, the high rates of growth in Ugala and Ghagga are partly due to the fact that the outmigration of people from these villages was relatively less.

Complete measures of outmigration from the villages are difficult to obtain. Therefore we have to be content with some indicators of outmigration. Such an indicator was obtained by asking the respondents to give information about the members of their family who lived outside the village. The relevant information is presented in Table 4.

The percentage of the members of the families who are staying outside the village to the total population of the village works out to be 3.37, 1.22 and 6.23 in Ugala, Ghagga and Ghudani Kalan respectively. The village which showed the highest rate of growth during 1971–80—Ghagga—has the lowest percentage of outmigration. The village which showed the lowest rate of growth during the same period—Ghudani Kalan—shows the highest percentage of outmigration. These findings support our assumption that the abnormal rates of growth in the given village are partly due to their differential rates of outmigration.

The contribution of the phenomenon of outmigration to the rates of growth of population in these villages is actually more than what appears from the relatively small percentages noted earlier. Most of the outmigrants are married men and in a large majority of cases their families also stay with them. Thus the normal growth rates of the villages would also be affected by the absence of the family members of the outmigrants. Obviously such an effect is also the greatest in Ghudani Kalan.

Having established the influence of inmigration and outmigration upon abnormal rates of population growth in the three villages we may now examine the effect of the natural increase. Here again our analysis would be in terms of certain indices and not of exact measures of fertility and mortality. If fertility and mortality had contributed to the abnormal rates of growth in the three villages then we would find that the fertility rates were higher in Ugala and Ghagga and lower in Ghudani Kalan; on the other hand we would find that the mortality rates were lower in Ugala and Ghagga as compared with Ghudani Kalan.

Table 4

Members of the Family Living Outside the Village according to the Relationship with the Heads of Households and the Purpose of Staying Out

Relationship	*Ugala*				*Ghagga*				*Ghudani Kalan*			
	Occupation	*Education*	*Other*	*Total*	*Occupation*	*Education*	*Other*	*Total*	*Occupation*	*Education*	*Other*	*Total*
Son	51	3	—	54	16	3	—	19	64	3	3	70
Daughter	—	—	—	—	—	2	—	2	—	2	—	2
Grandson	—	—	—	—	—	—	—	—	4	2	—	6
Brother	—	—	—	—	—	—	—	—	3	—	—	3
Nephew	—	—	—	—	—	—	—	—	9	1	—	10
Wife	—	—	—	—	1	—	—	1	—	—	—	—
TOTAL	51	3	—	54	17	5	—	22	80	8	3	91
	Number of married persons = 39. Number of married persons leaving wife & children in the village = 4.				Number of married persons = 16. Number of married persons leaving wife & children in the village = 1.				Number of married persons = 58. Number of married persons leaving wife & children in the village = 11.			

As an index of fertility we may consider the average number of pregnancies in the case of ever-married women for certain specified periods of effective married life (as shown in Table 5). It is clear that for every period of effective married life the average number of pregnancies is the lowest in Ghudani Kalan. For the women who have had an effective married life of more than 20 years and may be regarded as having completed their fertile period, the average number of pregnancies in Ghudani Kalan is appreciably lower than in Ugala and Ghagga (5.10 compared with 6.45 and 7.05).

Table 5

Average Number of Pregnancies according to Specified Periods of Effective Married Life in the Case of Ever-Married Women in the Three Villages

Periods of Married Life in Years	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	Number of Women	*Average Number of Pregnancies*	*Number of Women*	*Average Number of Pregnancies*	*Number of Women*	*Average Number of Pregnancies*
10–14	38	3.74	38	3.47	39	3.30
15–19	26	5.19	37	4.37	36	4.20
20 +	122	6.45	128	7.05	169	5.10

Another index of fertility which also supports the above-mentioned trend in the three villages is the child/woman ratio which is given by the formula:

$$\frac{\text{Children 0–4 years of age}}{\text{Women 15–44 years of age}} \times 100$$

These ratios in Ugala, Ghagga and Ghudani Kalan are 670, 505 and 475 respectively. This indicates the lowest degree of fertility among women in Ghudani Kalan.

Thus the evidence regarding fertility lends support to the assumption that the differential rates of fertility are a factor in the higher rates of growth of population in Ugala and Ghagga, on the one hand, and the lower rate of growth of population in Ghudani Kalan, on the other.

The percentage of deaths among children born to ever-married women may be taken as an index of mortality. The indices for the three villages are shown in Table 6. It is abundantly clear that the deaths among the children born to the women in our sample are of an appreciably higher degree in Ghudani Kalan as compared with Ugala and Ghagga. Therefore this evidence too is in conformity with the peculiar patterns of growth of population in the three villages.

Table 6

Percentage of Deaths Among the Children Born to Married Women in the Three Villages

	Percentages of Deaths		
	Male	*Female*	*Total*
Ugala	13.24	15.02	14.19
Ghagga	15.80	14.59	15.10
Ghudani Kalan	18.03	22.43	20.02

Ghudani Kalan which differs markedly from the other two villages in its growth pattern has another socio-demographic feature which also contributes to this difference. The distinguishing feature is that in Ghudani Kalan there are an abnormally large proportion of males above the age of 30 who are unmarried; they comprise 12.14 per cent of the total males in that age range compared with the corresponding percentages of 2.95 and 0.86 in Ghagga and Ugala respectively. Since children in these villages are born within marital unions and married women invariably come into the village from other communities, the unmarried state of adult men results in checking the growth of population of their village in two ways. First, by not bringing brides into the village; and, second, by preempting children being born to as many women as the would-be wives of the confirmed bachelors.

Another consequence of eligible men refraining from marriage is the reduced sex ratio. As illustrated in Table 7, the number of females per thousand males is the lowest in Ghudani Kalan. There are, however, other factors which also contribute to this low sex ratio. One of them is the very high percentage of deaths among the girls in this village (see Table 6).

Table 7
Sex Ratios in the Three Villages and in Punjab

Name of Territory	*Points of Time*			
	1951	*1961*	*1971*	*1980/81*
Ugala	940	927	908	925
Ghagga	772	796	839	940
Ghudani Kalan	—	839	826	862
Punjab	—	864	865	886

It is clear from the preceding analysis that there are significant differences in demographic variables between Ghudani Kalan on the one hand, and Ugala and Ghagga on the other, which are related to the marked differences in their rates of population growth. But what is important to note is the fact that the differences in the demographic variables of the villages are not related to the levels of their economic development as indicated by their sectoral transformation. As hypothesised from the theory of economic decision-making, the more a community is developed economically, the smaller would be its family size. But in this study, the two relatively more developed villages (Ghagga and Ghudani Kalan) show opposite trends of fertility (Table 5). Therefore, in the study villages, economic development does not appear to have influenced the fertility trends and family size in the manner predicted by the theory of economic decision-making.

The theory of economic decision-making would further imply that in a given society or a community, persons at higher levels of economic background would have smaller sized families as compared with those at lower levels. For the time being economic background may be reckoned in terms of two variables—household income and the occupational prestige of the head of the household. Therefore it may be hypothesised that (*a*) the higher the household income the lower the family size, and (*b*) the higher the occupational prestige of the head of the household the smaller the family size.

The data regarding household income and number of children of the heads of the households for Ugala, Ghagga and Ghudani Kalan are presented in Tables 8a, 8b and 8c respectively. The last columns of the tables show average family sizes. Both an examination of the tables and a consideration of the coefficients of correlation do not reveal any significant relationship between income and family size. The Spearman's product-moment coefficients of correlation between the two variables for Ugala, Ghagga and Ghudani Kalan are 0.124, 0.084 and 0.125 respectively.

Table 8a

Heads of Households in Ugala according to Annual Household Income and Number of Children

Income Categories	*Number of Children*							*Total*	*Average Family Size*
	0	*1*	*2*	*3*	*4*	*5*	*6+*		
Less than 2,500	1	7	1	7	4	8	16	44	4.43
2,500 to 5,000	1	2	4	10	7	5	13	42	4.48
5,000 to 7,500	3	2	1	3	8	4	15	36	4.39
7,500 to 10,000	—	3	—	2	2	1	7	15	4.73
10,000 to 15,000	—	—	1	4	8	3	8	24	4.83
15,000 to 20,000	—	—	—	3	4	4	7	18	5.50
20,000 to 30,000	—	—	1	—	2	5	4	12	5.25
30,000+	—	1	—	—	1	1	2	5	4.40
No response	—	—	1	1	1	1	—	4	3.50
TOTAL	5	15	9	30	37	32	72	200	4.63

Table 8b

Heads of Households in Ghagga according to Annual Household Income and Number of Children

Income Categories	*Number of Children*							*Total*	*Average Family Size*
	0	*1*	*2*	*3*	*4*	*5*	*6+*		
Less than 2,500	5	3	8	8	8	10	13	55	3.44
2,500 to 5,000	2	5	8	11	6	6	17	55	4.09
5,000 to 7,500	1	4	6	6	9	6	24	56	4.77
7,500 to 10,000	1	3	1	4	3	5	7	24	4.63
10,000 to 15,000	4	—	2	5	3	8	13	35	4.74
15,000 to 20,000	—	1	1	2	1	2	5	12	5.08
20,000 to 30,000	—	1	—	4	3	—	—	8	3.13
30,000+	1	—	1	—	—	—	3	5	5.00
No response	—	—	—	—	1	—	3	4	6.00
TOTAL	14	17	27	40	34	37	85	254	4.30

Table 8c

Heads of Households in Ghudani Kalan according to Annual Household Income and Number of Children

Income Categories	*Number of Children*							*Total*	*Average Family Size*
	0	*1*	*2*	*3*	*4*	*5*	*6+*		
Less than 2,500	11	4	4	12	7	8	6	52	3.07
2,500 to 5,000	8	8	9	8	13	12	11	69	3.38
5,000 to 7,500	8	1	5	12	11	6	6	49	3.29
7,500 to 10,000	2	—	3	3	4	4	3	19	3.63
10,000 to 15,000	2	2	2	3	6	2	7	24	4.17
15,000 to 20,000	—	—	2	—	2	—	2	6	4.33
20,000 to 30,000	1	1	3	3	3	1	—	12	2.75
30,000+	—	1	2	5	5	2	4	19	4.00
No response	1	—	—	—	—	—	—	1	0.00
TOTAL	33	17	30	46	51	35	39	251	3.42

Table 9 shows the average size of family according to income categories, taking into account only those heads of households whose wives are 40 years or older and who can be considered to have completed their families. Even these data do not bring out any clear-cut relationship between income and family size. Therefore, our data regarding income and size of family in the three villages are not in conformity with the economic decision-making theory.

Table 9

Number and Average Family Size of Heads of Households with Wives 40 years or Older according to Annual Household Income and Village

Income Categories	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	No.	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Less than 2,500	18	4.89	18	4.67	20	3.70
2,500 to 5,000	19	5.74	18	6.00	30	3.80
5,000 to 7,500	20	5.80	21	6.52	24	3.58
7,500 to 10,000	7	6.14	7	7.00	10	3.70
10,000 to 15,000	15	5.27	18	5.89	16	4.81
15,000 to 20,000	12	5.58	7	5.71	4	4.25
20,000 to 30,000	6	6.00	3	4.00	7	2.86
30,000+	2	5.50	1	7.00	7	3.43
No response	3	5.67	4	4.75	1	0.00
TOTAL	102	5.55	97	5.79	119	3.78

Table 10a

Heads of Households in Ugala according to Occupational Prestige and Number of Children

Occupational Prestige Categories in Ascending Order	*Number of Children*							*Total*	*Average Family Size*
	0	*1*	*2*	*3*	*4*	*5*	*6+*		
I	1	7	4	10	7	12	25	66	4.52
II	—	—	3	4	—	3	6	16	4.69
III	3	6	—	8	18	7	20	62	4.47
IV	1	2	1	5	10	7	14	40	4.78
V	—	—	—	1	1	1	3	6	5.83
VI	—	—	1	2	1	2	4	10	5.00
TOTAL	5	15	9	30	37	32	72	200	4.63

Table 10b

Heads of Households in Ghagga according to Occupational Prestige and Number of Children

Occupational Prestige Categories in Ascending Order	*Number of Children*							*Total*	*Average Family Size*
	0	*1*	*2*	*3*	*4*	*5*	*6+*		
I	5	4	9	11	8	16	24	77	4.08
II	1	4	1	3	5	4	7	25	4.16
III	4	9	10	13	15	11	35	97	4.35
IV	3	—	6	10	4	6	12	41	4.34
V	—	—	—	2	—	—	4	6	6.50
VI	1	—	1	1	2	—	3	8	4.50
TOTAL	14	17	27	40	34	37	85	254	4.30

Table 10c

Heads of Households in Ghudani Kalan according to Occupational Prestige and Number of Children

Occupational Prestige Categories in Ascending Order	*Number of Children*							*Total*	*Average Family Size*
	0	*1*	*2*	*3*	*4*	*5*	*6+*		
I	4	3	4	8	16	9	12	56	4.00
II	3	4	3	5	4	5	1	25	2.88
III	21	3	16	23	24	16	16	119	3.28
IV	3	4	5	6	5	4	9	36	3.72
V	—	—	1	—	2	—	1	4	4.00
VI	—	1	—	2	—	—	—	3	2.33
No occupation	2	2	1	2	—	1	—	8	1.88
TOTAL	33	17	30	46	51	35	39	251	3.42

The data pertaining to the relationship between occupational prestige of the head of the household and his family size are presented in Tables 10a, 10b and 10c for Ugala, Ghagga and Ghudani Kalan. Table 11 gives the summary information for all the three villages in respect of heads of households who have completed their families. All this information does not indicate any significant relationship between occupational prestige and family size either. The Spearman's product-moment coefficients of correlation between these two variables for Ugala, Ghagga and Ghudani Kalan are −0.006, 0.009 and −0.082 respectively. This evidence also does not support the theory of economic decision-making.

Education is another important variable whose negative correlation with family has been widely noticed. In the three study villages most of the heads of households as well as their spouses are illiterate; the spread of education however is higher among the former than among the latter. In the urban communities in particular, there is a high degree of correlation between education on the one hand and occupational prestige and income, on the other. But in the study villages (where the economy is still predominantly in the unorganised sector) there does not appear to be any relationship of this nature. But we do find some significant negative relationships, although very weak, between education and the size of the family in most cases. This is so whether we consider the education of the wives of

Table 11

Number and Average Family Size of Heads of Households with Wives 40 Years or Older according to Occupational Prestige Category and Village

Occupational Prestige Categories in Ascending Order	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	No.	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
I	27	5.70	24	6.21	22	4.55
II	5	5.80	10	5.00	14	2.71
III	36	5.45	39	5.77	56	4.16
IV	26	5.31	18	5.33	16	3.56
V	4	7.00	3	8.00	3	3.67
VI	4	5.25	3	6.00	2	1.50
No occupation	—	—	—	—	6	1.50
TOTAL	102	5.55	97	5.79	119	3.78

Table 12

Number of Families and Average Family Size according to the Educational Levels of Wives of Heads of Households in Ugala, Ghagga and Ghudani Kalan

Educational Level	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	Number of Families	*Average Family Size*	*Number of Families*	*Average Family Size*	*Number of Families*	*Average Family Size*
Illiterate	150	4.64	183	4.55	153	3.74
Below Primary	11	3.55	8	5.38	6	2.83
Primary	12	5.08	9	3.78	13	3.38
Middle	4	4.25	4	1.50	5	2.80
Secondary	6	2.33	7	2.57	6	1.67
Graduate and above	1	2.00	2	1.50	1	1.00
TOTAL	184	4.51	213	4.40	184	3.57

Table 13

Number of Families and Average Family Size according to the Educational Levels of Heads of Households in Ugala, Ghagga and Ghudani Kalan

Educational Level	*Ugala*		*Ghagga*		*Ghudani Kalan*	
	Number of Families	*Average Family Size*	*Number of Families*	*Average Family Size*	*Number of Families*	*Average Family Size*
Illiterate	96	4.73	114	4.67	101	3.96
Below Primary	12	5.08	28	5.50	21	3.62
Primary	25	4.56	23	3.61	14	3.07
Middle	22	4.41	17	4.06	13	3.77
Secondary	26	3.58	26	3.50	19	2.84
Graduate and above	3	3.33	4	1.00	3	3.33
No information	—	—	1	4.00	13	1.92
TOTAL	184	4.51	213	4.40	184	3.57

the heads of households (Table 12) or that of the heads of households themselves (Table 13). The Spearman's coefficients of correlation between the two variables in respect of the wives of the heads of households in Ugala, Ghagga and Ghudani Kalan are −0.154,

−0.232 and −0.218 respectively and in respect of the heads of the households are −0.168, −0.099 and −0.202 respectively. All the values except −0.099 are significant at 1 per cent level of significance.

Even though education has some influence in reducing family size, it cannot be said that it has so far played a significant role in demographic change in all the villages. Nor can it be said that it is an important factor in enabling Ghudani Kalan in achieving a relatively smaller family size. First, as pointed out already, the negative relationship between education and family size is very weak in every case. Secondly, as can be seen from Tables 12 and 13, the educational background of couples in Ghudani Kalan is in no way better than that of the couples in the other two villages.

Thus it would appear that in the earlier stages of economic development there is hardly any significant negative relationship between economic variables and family size. On the other hand, economic development in a given community attracts people from other areas thereby contributing to a rapid growth of its population.

5

Economic Transformation, Mobility and Social Structure in the Three Villages

In Chapter **4** it has been shown that only income or status levels of persons do not bring out the effect of economic development on family size. These findings, however, do not rule out the effect of economic development on family size. Rather they imply that the variables considered (such as income and occupational prestige) do not depict the significant economic situation for purposes of fertility behaviour; as already assumed in Chapter 1, the significant economic situation for such purposes is the type of economic adjustment. One of the important indicators of economic adjustment is intergenerational occupational mobility. It is assumed that the mobility experiences of people would be important determinants of family size.

Insofar as economic development brings about a sectoral transformation of the economy resulting in the creation of new occupations, it inevitably accelerates occupational mobility. Therefore in studying the relationship between economic development and population growth, it is necessary to examine the mobility opportunities provided by economic transformation. It is generally recognised that the social structure plays an important part in channelling mobility opportunities. If so, it would also indirectly influence family size.

In view of these considerations, an attempt will be made in this chapter to examine the role played by the social structure in economic adjustment in the face of economic transformation. The relationship between economic adjustment and family size will be discussed in Chapter 6.

The traditional rural society in India was dominated by agriculture and tended towards remaining self-sufficient and isolated. Most of the occupations were in the agricultural sector—made up of cultivators and agricultural labourers. Those pursuing non-agricultural occupations earned their livelihood by fulfilling, in one way or another, the needs of agriculturists. Migration from the village to the city or from one village to another for the purpose of earning one's livelihood, was minimal; almost all the villagers resided and worked in the same village. This is, no doubt, an ideal-typical picture, but a useful one for understanding the nature and extent of economic transformation and mobility that are taking place in the rural areas of India in general and of the region comprising Haryana and the Punjab in particular.

The economic transformation of the rural areas of Haryana and the Punjab has been very rapid during the last couple of decades and this unprecedented change has been referred to as the Green Revolution. For the first time in this region the growth in agriculture has led to an expansion of activity in the non-agricultural sectors. A major part of the inputs in agriculture are now produced in the non-agricultural sector. The increase in agricultural production has generated enormous quantities of marketable surplus as well as of raw material for agro-based industries. These new developments have led to an increasing degree of trading and manufacturing activities.

An important feature of the rural development in this region is the initiative taken by the government in building up the necessary infrastructure—including the construction and maintenance of roads, supply of electricity and other kinds of energy requirements, distribution of seeds and fertilisers, provision of health, educational and marketing facilities and the setting up of cooperative and financial institutions. As these are all highly organised activities, they have resulted in the intrusion of large-scale organisations into the rural areas. The organised sector of the rural economy is also augmented by the starting of agro-based industries in the rural areas. Before the commencement of planned rural development almost all the economic activities (except some health and educational services) were in the informal sector, but subsequently the share of the activities in the organised sector has been gradually increasing.

Economic changes, such as those pointed out in the foregoing, are giving rise to an increasing tempo of spatial and occupational mobility. Spatial mobility for economic reasons may take various forms—residents of a village migrating permanently to other villages as well as to towns; persons living in a village commuting daily to other places of work as well as persons living in other places (rural as well as urban) commuting to a given village for work. Occupational mobility may also take different forms—from agricultural to non-agricultural occupations and vice versa; from occupations of lower prestige to those of higher prestige and vice versa; from occupations in the informal sector to those in the formal sector and vice versa.

All these changes have important consequences for society. It is a well-known fact that the traditional society in India (including Haryana and Punjab) was stratified into castes. The different caste groups practised different types of occupations. The status hierarchy of the caste groups corresponded with the prestige hierarchy of the occupations followed by their members. From the standpoint of the modern value system, such an inegalitarian and rigidly stratified society represents an unjust social order. Therefore it is hoped that the new economic opportunities are shared by the different sections of the population in an equitable manner so that there would be a transformation of the traditional social structure into a less rigid and more egalitarian social order.

Given the economic changes and mobility trends described earlier and the value premises made, a number of significant questions suggest themselves for investigation. Have economic changes disturbed the correspondence between caste and occupation? How have the different caste groups reacted to different kinds of changes? What is the degree of involvement of the different caste groups in the different forms of spatial mobility? What is the extent to which different castes have availed themselves of the opportunities in formal organisations? Are all these changes leading to a transformation of the social structure in the desired direction?

It was hypothesised that the socio-economic changes taking place in the region would result in various forms of spatial mobility. One such form of mobility is the permanent migration of the residents of a village to other places. We have no way of knowing the extent of migration of entire families, but we have obtained information about the migration of the members of the resident families, ignoring, of course, the women who left the village after marriage. As already pointed out (Chapter 4, Table 4) there were 54 such persons in Ugala, 22 in Ghagga and 91 in Ghudani Kalan in the sample population. Most of the members of the households who were living outside were doing so for the sake of employment. In Ugala, 51 persons who are living away from their homes are pursuing gainful employment in the places of their migration. Of the 22 persons living outside of Ghagga, 17 were doing so for work and 5 for education. In the case of Ghudani Kalan, of the persons living outside, 80 were employed, 8 were studying and 3 had other reasons for living outside. Those who have migrated specifically for employment are all males except one woman who is the wife of a person residing in Ghagga.

An important kind of spatial mobility which has been generated by the new economic opportunities in rural areas is the daily commuting of workers from a village to other nearby villages and towns. From the standpoint of a given village the persons involved in this process may be divided into two categories: (*i*) residents of the village working in other places outside the village, and (*ii*) residents of other places working in the village. The volume of these two categories of mobility in relation to persons who are residing as well as working in the same village in respect of Ugala, Ghagga and Ghudani Kalan is shown in Tables 1a, 1b and 1c respectively.

Table 1a

Distribution of Sample of Workers in Ugala according to Sector of the Economy and Residence

	Residing and Working in the Village	*Residing in the Village but Working Outside*	*Residing Outside but Working in the Village*
Informal Sector	332 (95.40)	3 (20.00)	9 (60.00)
Agricultural	244 (70.11)	—	—
Trade	30 (8.62)	2 (13.33)	7 (46.67)
Others	58 (16.67)	1 (6.67)	2 (13.33)
Formal Sector	16 (4.60)	12 (80.00)	6 (40.00)
Government	16 (4.60)	10 (66.67)	6 (40.00)
Public sector	—	—	—
Private sector	—	2 (13.33)	—
TOTAL (= 100%)	348	15	15

Note: Figures in brackets are percentages.

Table 1b

Distribution of Sample of Workers in Ghagga according to Sector of the Economy and Residence

	Residing and Working in the Village	*Residing in the Village but Working Outside*	*Residing Outside but Working in the Village*
Informal Sector	449 (97.19)	7 (25.93)	10 (52.63)
Agricultural	350 (75.76)	—	—
Trade	62 (13.42)	7 (25.93)	4 (21.05)
Others	37 (8.01)	— —	6 (31.58)
Formal Sector	13 (2.81)	20 (74.07)	9 (47.37)
Government	13 (2.81)	20 (74.07)	9 (47.37)
Public sector	—	—	—
Private sector	—	—	—
TOTAL (= 100%)	462	27	19

Note: Figures in brackets are percentages.

Tables 1a, 1b and 1c also give an analysis of workers according to informal and formal sectors of the economy with further subdivisions. Such a break-up gives one the idea of the types of economic activities which generate commuter traffic in rural areas.

There are certain common features as well as differences in the distribution of workers in the three villages. In all the villages an overwhelming percentage of the workers belong to the category of those who reside as well as work in the same village. Workers residing in the village but working in other places as well as those commuting to the village from other places comprise much smaller percentages in every village. The percentage of workers residing in the village but working outside, to the total number of workers residing in the village, are *4.60*, *5.50* and *13.82* respectively and the percentage of workers residing outside but working in the village to the total number of persons working in the village are *4.60*, *3.95* and *4.84* respectively in Ugala, Ghagga and Ghudani Kalan. All the same, it is worth noting that a substantial number of workers in the villages are commuting to different places of work. The percentage of commuting workers, especially in the case of those who reside in the village but work outside, is larger in Ghudani Kalan.

Again in every village an overwhelming percentage of workers are employed in the informal sector (96.51 in Ugala, 91.55 in Ghagga and 87.39 in Ghudani Kalan). So also in every village the workers in the informal sector are most highly over-represented in the category of those residing and working in the same village (95.40 in Ugala, 97.19 per cent in Ghagga and 99.24 per cent in Ghudani Kalan). On the other hand, the workers in the formal sector are over-represented among the commuters in every village; in Ugala 18 out of 34 workers in the formal sector are commuters and the corresponding figures in Ghagga and Ghudani Kalan are 29 out of 42 and 57 out of 60 respectively.

When we look at the informal sector, it becomes evident, as expected, that the overwhelming majority of workers are employed

Table 1c

Distribution of Sample of Workers in Ghudani Kalan according to Sector of the Economy and Residence

	Residing and Working in the Village		*Residing in the Village but Working Outside*		*Residing Outside but Working in the Village*	
Informal Sector	390 (99.24)		21 (33.33)		5 (25.00)	
Agricultural		360 (80.41)		—		—
Trade		30 (7.63)		5 (7.94)		3 (15.00)
Others		44 (11.20)		16 (25.39)		2 (10.00)
Formal Sector	3 (0.76)		42 (66.67)		15 (75.00)	
Government		3 (0.76)		37 (58.73)		11 (55.00)
Public sector		—		1 (1.59)		1 (5.00)
Private sector		—		4 (6.35)		3 (15.00)
TOTAL (= 100%)	393		63		20	

Note: Figures in brackets are percentages.

in agriculture. This is true in every village. As far as the non-agricultural workers are concerned, trade provides relatively more employment in Ghagga and other activities, mainly services, in Ugala and Ghudani Kalan. The most remarkable feature of the economic activities in the informal sector is that in all the villages employment in agriculture is confined solely to the residents of the same village. Non-agricultural employment in the informal sector has provided some scope for commuters but not to the same extent as in the case of employment in the formal sector.

Among the various categories of formal organisations it is mainly the government which is responsible for providing employment in these rural areas. Employment in public and the private sector undertakings is altogether absent in Ugala, although it is marginally present in Ghudani Kalan and Ghagga.

An overall conclusion which can be drawn from the data provided in Tables 1a, 1b and 1c is that the transformation of the rural economy from the agricultural to the non-agricultural sectors and from the informal to the formal sectors of organisation has been giving rise to commuter mobility. Commuter mobility is accentuated by the incorporation of economic activities in the organised sector.

These changes obviously have repercussions which affect the social structure. Either the social structure may undergo a transformation into some other form in response to these changes or it may adapt the changes to its existing form. What has been the response of the social structure to the economic changes in these three villages will be examined next.

For an analysis of economic change and social structure in the Indian villages it is useful to take into account the social prestige of occupations and the social status of caste groups. It is in their prestige or status dimension that the economy and the social structure intersect with each other the most. Therefore, for the purpose of our analysis, the various occupations and the caste groups in each village were graded according to their prestige with the help of a small sample of residents purposively selected. The ranking of similar occupations turned out to be more or less the same in all the villages. But there were some important differences in the ranking of caste groups. For instance, the Bania and Khatri castes are ranked higher than the Jat in Ghagga but lower than them in Ghudani Kalan. In Ugala, Rajputs are superior to all non-Brahmin castes. These differences, however, are in accordance with the fact that in Ghagga, which is a trading centre, the trading castes (Bania and Khatri) are found in substantial numbers and have a higher occupational prestige as compared with the cultivator caste of Jats. In Ugala the Rajputs are the dominant cultivating caste. On the whole, the overall occupationl prestige of a caste group and its position in the caste hierarchy are related.

A synoptic view of the social structure of the villages can be had by cross-tabulating the workers among the residents of a village according to their caste and occupational prestige. The relevant information for each study village is presented in Tables 2, 3, and 4. The castes as well as occupations are arranged in a descending order of prestige in the tables. The occupations are also divided into the following seven broad prestige categories and the category in which an occupation is included is indicated by the numbers:

Table 2

Percentage Distribution of Workers in the Sample of Residents of Ugala according to Caste Status and Occupational Prestige

Caste	*Occupational Prestige Score*						*Total No. = 100%*	*Average Prestige Score*
	6	*5*	*4*	*3*	*2*	*1*		
Brahmin		19.2	23.1	23.2	15.4	19.1	26	3.08
Rajput	25.5		45.1	23.5	5.9		51	4.16
Bania	3.5	10.4	55.1	20.7	10.3		29	3.76
Khatri	14.6		41.5	39.0	4.9		41	3.76
Jat	100.0						1	6.00
Suniar		42.9		28.6	28.5		7	3.57
Saini			21.5	64.3	7.1	7.1	14	2.93
Kamboj			20.6	73.6	5.8		34	3.15
Labana			42.9	42.8	14.3		14	3.29
Tarkhan	7.1		7.1	57.0	28.6		14	3.01
Nai						100.0	5	1.00
Bazigar				58.3	4.2	37.5	24	2.21
Mazbi Sikh						100.0	12	1.00
Dhobi/Kahar				25.9	11.1	63.0	27	1.63
Ramdasia				8.6	4.3	67.1	70	1.21
Total number	22	11	79	117	30	110	369	2.78
TOTAL %	6.0	3.0	21.5	31.7	8.1	30.1	100	

Table 3

Percentage Distribution of Workers in the Sample of Residents in Ghagga according to Caste Status and Occupational Prestige

Caste	*Occupational Prestige Score*						*Total No. = 100%*	*Average Prestige Score*
	6	*5*	*4*	*3*	*2*	*1*		
Brahmin			12.1	60.5	15.2	12.2	33	2.72
Bania	6.0	5.9	47.8	35.8	1.5	3.0	67	3.70
Khatri	5.6	11.2	22.2	33.2	5.6	22.2	18	3.00
Jat	5.7		44.9	45.8	1.8	1.8	107	3.56
Suniar		100.0					1	5.00
Rajput		20.0	20.0	20.0	40.0		5	3.20
Kamboj			100.0				2	4.00
Gujjar	25.0			75.0			4	3.75
Tarkhan				70.0	20.0	10.0	20	2.60
Kumhar		33.3		33.4		33.3	18	2.59
Nai				14.3		85.7	7	1.29
Shimba					100.0		3	2.00
Bazigar				6.0		94.0	84	1.12
Kahar				20.0	20.0	60.0	5	1.80
Ramdasia				24.4	22.6	53.0	115	1.71
Mazbi Sikh				10.0	25.0	65.0	20	1.35
Total number	12	8	97	160	50	182	509	2.47
TOTAL %	2.4	1.6	18.9	31.5	9.9	35.8	100	

1. Agricultural labourer, sweeper, domestic/shop servant, watchman, peon, barber, cobbler, horse-cart driver
2. Police constable, share-cropper, salesman, skilled worker
3. Driver, clerk, small farmer, petty shopkeeper, carpenter, mechanic, blacksmith, electrician, priest
4. Medium shopkeeper, school teacher, medium farmer
5. Doctor (RMP), flour miller, goldsmith, transporter
6. Large farmer, government officer (BDO, etc.), wholesaler, bank manager
7. Doctor (MBBS), lawyer

The average score of occupational prestige of the members of each caste are listed in the last column of each table.

It is obvious from Tables 2, 3 and 4 that there is a relationship between caste status and occupational prestige. The average score of occupational prestige on the whole diminishes with the status of

Table 4

Percentage Distribution of Workers in the Sample of Residents of Ghudani Kalan according to Caste Status and Occupational Prestige

Caste	Occupational Prestige Score							Total No. = 100%	Average Prestige Score
	7	6	5	4	3	2	1		
Brahmin	3.6		17.9	21.4	50.0	3.6	3.5	28	3.60
Jat	0.4	1.4		30.8	59.5	5.1	2.8	282	3.25
Bania				100.0				1	4.00
Khatri					100.0			6	3.00
Suniar					100.0			1	3.00
Nai					37.5	12.5	50.0	8	1.88
Tarkhan			7.7		69.2	23.1		13	2.94
Shimba					12.5	75.0	12.5	8	2.00
Gujjar						50.0	50.0	2	1.50
Dhobi/Kahar					22.8	22.9	54.3	13	1.69
Mazbi Sikh							100.0	3	1.00
Ramdasia				2.2	9.9	6.6	81.3	91	1.33
Total number	2	4	6	96	214	35	99	456	2.76
TOTAL %	0.4	0.8	1.3	21.0	47.0	7.7	21.8	100	

the caste. However, there are some minor discrepancies which should not detain us. With the exception of castes with a small number of workers, workers in a caste are distributed in different occupations. But they are distributed in such a manner that in the higher castes they have occupations in the higher range of prestige and in the lower castes in the lower range of prestige; workers in the intermediate castes have occupations in the middle of the occupational-prestige range. On the whole, the correlation between caste status and occupational prestige is very high in every village, the Product Moment coefficients of correlation being 0.715, 0.627 and 0.724 for Ugala, Ghagga and Ghudani Kalan respectively.

On the other hand, if we view the distribution of the workers in the various castes from the perspective of the broad sectors of the economy, a different picture emerges, which shows a relative concentration of the workers belonging to a caste in one or another of the broad economic sectors. In Tables 5, 6 and 7 the occupations of large farmers, medium farmers, small farmers, share-croppers and agricultural labourers are combined into the broad category of agriculture. Similarly, wholesalers, medium shopkeepers, petty

Table 5
Percentage Distribution of Workers in Ugala according to Caste and Broad Economic Sectors

Caste	*Agriculture*	*Trade*	*Others*	*Total Number (= 100%)*
Brahmin	15.39	19.23	65.38	26
Rajput	90.20	7.84	1.96	51
Bania	17.24	48.28	34.48	29
Khatri	73.16	17.08	9.76	41
Jat	—	—	100.0	1
Suniar	—	14.29	85.71	7
Saini	92.86	—	7.14	14
Kamboj	97.06	—	2.94	34
Labana	78.57	—	21.43	14
Tarkhan	—	14.28	85.72	14
Nai	20.00	—	80.00	5
Bazigar	87.49	4.17	8.34	24
Mazbi Sikh	83.33	—	16.67	12
Dhobi/Kahar	81.48	—	18.52	27
Ramdasia	71.43	—	28.57	70
TOTAL	66.67	8.94	24.39	369

shopkeepers, and salesmen are combined into the category of trade and the remaining occupations are lumped together in the omnibus category of 'others'.

In every village the different caste groups are differentially represented in the various sectors of the economy. Rajput, Saini and Kamboj caste members are overwhelmingly represented in the agricultural sector in Ugala (Table 5). Other castes which are highly represented in this sector are the Khatri, Labana, Bazigar, Mazbi Sikh, Dhobi/Kahar and Ramdasia. But the agricultural castes higher in the caste ranking are mostly large and medium cultivators and the castes in the descending order follow occupations in the lower rungs of the agricultural ladder. The lowest castes of Mazbi Sikh, Dhobi/Kahar and Ramdasia are mainly agricultural labourers.

In the trade sector the Bania caste is the most highly represented in Ugala. In the sectors other than agriculture and trade the Brahmin, Suniar, Tarkhan and Nai castes are prominently represented. These are the traditional service and artisan castes. The Jat caste consisting of one migrant family residing in the village (in government service) may be excluded from our consideration. By and large the high

Table 6

Percentage Distribution of Workers in Ghagga according to Caste and Broad Economic Sectors

Caste	*Agriculture*	*Trade*	*Others*	*Total Number (= 100%)*
Brahmin	78.79	3.03	18.18	33
Bania	8.95	74.63	16.42	67
Khatri	16.68	38.89	44.43	18
Jat	87.87	—	12.13	107
Suniar	—	—	100.00	1
Rajput	60.00	20.00	20.00	5
Kamboj	100.00	—	—	2
Gujjar	100.00	—	—	4
Tarkhan	30.00	5.00	65.00	20
Kumhar	83.33	5.55	11.12	18
Nai	57.13	—	42.87	7
Shimba	—	—	100.00	3
Bazigar	91.67	5.95	2.38	84
Kahar	60.00	20.00	20.00	5
Ramdasia	89.56	—	10.44	115
Mazbi Sikh	85.00	—	15.00	20
TOTAL	71.51	13.16	15.33	509

Table 7

Percentage Distribution of Workers in Ghudani Kalan according to Caste and Broad Economic Sectors

Caste	*Agriculture*	*Trade*	*Others*	*Total Number (= 100%)*
Brahmin	3.57	28.57	67.86	28
Jat	85.83	2.13	12.04	282
Bania	100.00	—	—	1
Khatri	—	66.67	33.33	6
Suniar	—	100.00	—	1
Nai	—	25.00	75.00	8
Tarkhan	—	—	100.00	13
Shimba	12.50	—	87.50	8
Gujjar	50.00	—	50.00	2
Dhobi/Kahar	61.54	7.69	30.77	13
Mazbi Sikh	—	—	100.00	3
Ramdasia	69.23	10.98	19.79	91
TOTAL	69.50	6.58	23.92	456

representation of a caste in a particular economic sector and occupation follows its traditional economic role.

In Ghagga (Table 6) the Brahmin, Jat, Kamboj, Gujjar, Bazigar, Kumhar, Ramdasia and Mazbi Sikhs are well represented in agriculture. However, as in Ugala, the higher castes occupy the higher echelons of the agricultural ladder and the lower castes, the lower ones. The Jats, Kambojs and Gujjars are traditional farming castes—the Ramdasias and the Mazbi Sikhs are their farm-hands. The Bazigars were traditionally a wandering tribal community but have now settled down, and have had to start from the bottom. The Brahmins in Patiala district (in which Ghagga is located) are also generally engaged in agriculture. It is worth noting that a substantial percentage of Ramdasias in this village are small farmers, a phenomenon which is atypical of this caste. They are the beneficiaries of a settlement scheme started by the government a few years ago.

The Banias and Khatris, especially the Banias, are highly represented in trade which is their caste speciality. Castes which are well-represented in activities other than trade and agriculture are Khatri, Suniar, Tarkhan, Nai and Shimba. The Khatris have been branching out in different directions although in trade they are second only to the Banias. The Suniar, Tarkhan, Nai and Shimba work mostly in their traditional callings of goldsmith, carpenter, barber and tailor respectively.

A somewhat similar distribution of workers belonging to the various castes in the broad economic sectors as found in Ghagga can also be seen in Ghudani Kalan (Table 7). Here also the Jats are the major caste of farmers; their farm-hands belong mainly to the castes of Ramdasia and Kahar. There is only one worker of Bania caste but he is a farmer notwithstanding the fact that the traditional occupation of his caste is trading. It may be surmised that the trading activity in this village has not developed because of an insignificant number of Bania families among its residents. The traders here are mostly Brahmins and Khatris along with the members of a few other castes, but most of them are petty shopkeepers. There are two wholesalers among the Jats. They are liquor contractors having their business outside the village.

The Brahmin, Nai, Tarkhan, Shimba and Mazbi Sikhs are markedly well-represented in economic activities other than agriculture and trade. In all these castes (except the Brahmin) most of the members follow their traditional caste occupations; Nais are barbers, Tarkhans are carpenters, Shimbas are tailors and Mazbi Sikhs are sweepers. The Brahmins have acquired various professional occupations; even among them there are four persons following their traditional caste occupation of priesthood. Thus the hold of traditional occupations appropriate to each caste is present almost in every caste in all the villages.

Finally, let us examine how contemporary changes have affected the social structure. In operational terms we may see to what extent the transformation of the economy has affected the occupational prestige of the various caste groups in every village. An appropriate method of analysing such a relationship would be to compare the occupational prestige of the heads of households with that of their sons. It may be assumed that the sons in the families would be more affected by the contemporary changes than their fathers. The women are excluded as they comprise a small proportion of the working force and as there is no uniformity in their participation in work in the various castes.

In Tables 8, 9 and 10 the sons of heads of households in the three study villages are listed according to their own occupational prestige and the occupational prestige of the heads of households. In all there are 134 sons belonging to 83 households in Ugala, 166 sons belonging to 105 households in Ghagga and 180 such persons belonging to 102 households in Ghudani Kalan. In Ugala (Table 8) 105 sons have remained in the same occupation as their fathers—among those who have shifted, 10 have moved to occupations of

Table 8

Distribution of Sons of Heads of Households in Ugala according to their Occupational Prestige and the Occupational Prestige of their Fathers

Occupational Prestige Score of Fathers	*Occupational Prestige Score of Sons*						*Total*
	6	*5*	*4*	*3*	*2*	*1*	
6	10						10
5		4		3			7
4	1		26	3	4		34
3			5	35	3	2	45
2	1	1			6	4	12
1					2	24	26
TOTAL	12	5	31	41	15	30	134

Table 9

Distribution of Sons of Heads of Households in Ghagga according to their Occupational Prestige and the Occupational Prestige of their Fathers

Occupational Prestige Score of Fathers	*Occupational Prestige Score of Sons*						*Total*
	6	*5*	*4*	*3*	*2*	*1*	
6	3		4				7
5							—
4		1	40	1			42
3				43	4	12	59
2				1	9	6	16
1		1		3	4	34	42
TOTAL	3	2	44	48	17	52	166

Table 10

Distribution of Sons of Heads of Households in Ghudani Kalan according to their Occupational Prestige and the Occupational Prestige of their Fathers

Occupational Prestige Score of Fathers	*Occupational Prestige Score of Sons*							*Total*
	7	*6*	*5*	*4*	*3*	*2*	*1*	
7								—
6		1		1				2
5	1		1		4			6
4				34	3			37
3				7	67	2	5	81
2					3	7	1	11
1					5	1	37	43
TOTAL	1	1	1	42	82	10	43	180

higher prestige and 19 to lower ones as compared with the occupational prestige of their fathers. In all, 21.6 per cent of the sons have moved away from the occupations of their fathers.

Likewise in Ghagga (Table 9) 22.3 per cent of the sons have experienced mobility. Among 37 mobile sons 10 have moved upwards and 27 downwards.

In Ghudani Kalan (Table 10), while 147 sons are in the same occupation as their fathers, 33 (18.3 per cent) have moved away, 17 of them representing upward mobility and 16 downward.

The mobility patterns are almost the same in all the three villages.

Nearly the same percentage (from 18.3 to 22.3) of sons have experienced mobility. However, the volume of mobility is larger when we consider finer gradations of occupational prestige (not shown in the tables) when the percentages of mobile sons rise to 32.8, 27.1 and 30.0 in Ugala, Ghagga and Ghudani Kalan respectively. On the whole, there is a very high degree of correlation between the occupational prestige of father and son in every village even when finer gradations of occupational prestige are considered. The Product Moment coefficients of correlation for Ugala, Ghagga and Ghudani Kalan are 0.862, 0.787 and 0.852 respectively. Incidentally, in Ghagga, the village with a greater degree of sectoral change, the coefficient of correlation is of a slightly lower order comparatively.

An idea of the role played by the organised or formal sector in occupational mobility of sons can be had by looking at Tables 11, 12 and 13. These tables show the distribution of sons according to their employment in the different sectors of the economy in relation to the employment of their fathers in Ugala, Ghagga and Ghudani Kalan respectively. In Ghagga (Table 12) the formal sector has played a negligible role in the mobility of sons. Only 4 heads of households and 2 sons in this village are employed in the formal

Table 11

Sons according to Sector of Employment and the Sector of Employment of their Fathers in Ugala

Sector of Employment of Sons / *Sector of Employment of Head of Household*	*Informal Sector*			*Formal Sector*			*Total*
	Agriculture	*Trade*	*Others*	*Govt.*	*Other Public Sectors*	*Private*	
Informal Sector							
Agriculture	76	5	3	3	—	1	88
Trade	3	6	4	3	—	—	16
Others	4	3	16	4	—	—	27
Formal Sector							
Government	2	—	—	1	—	—	3
Other public sectors	—	—	—	—	—	—	—
Private	—	—	—	—	—	—	—
TOTAL	85	14	23	11	—	1	134

sector. In the case of three of the heads of households in the formal sector their sons have reverted to the informal sector.

On the other hand, the formal sector has played a significant role in providing mobility opportunities for the workers of the younger generation both in Ugala and Ghudani Kalan (particularly in the latter). In Ugala, 3 workers of the older generation and 12 belonging to the younger generation are in the formal sectors; the corresponding figures for Ghudani Kalan are 5 and 17.

Table 12

Sons according to Sector of Employment and the Sector of Employment of their Fathers in Ghagga

Sector of Employment of Sons / *Sector of Employment of Head of Household*	*Informal Sector*			*Formal Sector*			*Total*
	Agri-culture	*Trade*	*Others*	*Govt.*	*Other Public Sectors*	*Private*	
Informal Sector							
Agriculture	130	6	4	1	—	—	41
Trade	—	13	—	—	—	—	13
Others	2	1	5	—	—	—	8
Formal Sector							
Government	—	1	2	1	—	—	4
Other public sectors	—	—	—	—	—	—	—
Private	—	—	—	—	—	—	—
TOTAL	132	21	11	2	—	—	166

When we consider the marginal totals of the tables we find that in Ugala (Table 11), as compared with the older generation, the workers in the younger generation have secured fewer opportunities in activities other than agriculture and trade in the informal sector but have obtained a better foothold in the formal sector. In Ghagga (Table 12) the workers in the younger generation are less represented in agriculture, but well-represented in the trade sector. On the other hand, in Ghudani Kalan, the younger generation of workers are little-represented in agriculture and other activities in the informal sector and in government organisations in the formal sector. All these differences are in accord with the economic trans-

Table 13

Sons according to Sector of Employment and the Sector of Employment of their Fathers in Ghudani Kalan

Sector of Employment of Sons / *Sector of Employment of Head of Household*	*Informal Sector*			*Formal Sector*			*Total*
	Agriculture	*Trade*	*Others*	*Govt.*	*Other Public Sectors*	*Private*	
Informal Sector							
Agriculture	122	4	1	10	1	1	139
Trade	—	2	—	—	—	1	3
Others	13	5	12	3	—	—	33
Formal Sector							
Government	2	—	2	1	—	—	5
Other public sectors	—	—	—	—	—	—	—
Private	—	—	—	—	—	—	—
TOTAL	137	11	15	14	1	2	180

formations taking place in the different villages discussed elsewhere.

Taking the three villages together it is apparent that trade in the informal sector and government organisations in the formal sector are providing employment and greater opportunities of mobility for new entrants. Further data, not contained in the tables, indicate that growing employment in these sectors has for the most part helped the members of the younger generation either to maintain the prestige level of their relatives in the older generation or to improve upon it. In the case of sons in these sectors, whose occupational prestige has fallen below that of their fathers, the difference is not much. Thus the trade and the formal sectors, besides providing additional occupations, have helped the villagers in maintaining their social standing.

Let us now examine the impact of all these changes upon the relative social standing of the various castes in every village. Since our purpose is to assess the influence of contemporary economic changes, one way of gauging the impact would be to compare the relative positions of the castes on the basis of the average occupational prestige of the heads of households, with their relative position on the basis of the average occupational prestige of their sons. One may reasonably assume that the younger members in the households would be more affected by the recent changes. If the changes have affected the social structure one would expect to find that the relative positions of the caste groups in the above two cases would be different. So also the relative positions of the caste groups on the basis of the average occupational prestige of all the workers would be different from their relative positions on the basis of the average occupational prestige of the heads of households alone.

Tables 14, 15 and 16 give the profile of occupational prestige of castes in Ugala, Ghagga and Ghudani Kalan respectively. It is clear from these tables that in all the villages there is a remarkable degree of correspondence in the relative positions of the caste groups whether we make comparisons between sons (Column 4) and their heads of households (Column 2) or between the heads of households (Column 6) and the total number of workers (Column 7). There are some minor differences which may be due mainly to factors such as sampling variability and small size of castes; the influence, if any, of the economic changes on such differences is very little. The Rank Difference coefficients of correlation between the occupational prestige of working sons (Column 4) and that of their fathers (Column 2) are 0.927, 0.908 and 0.956 in Ugala, Ghagga and Ghudani Kalan respectively. Therefore, the relative positions of the castes in terms of occupational prestige seem to have remained almost stable. In other words, the social structure of the village communities has not been perceptibly disturbed by economic changes.

It is, however, not to suggest that the minor changes in the occupational prestige of the castes—such as those reflected in the differences between the average occupational prestige score of the heads of households (Column 6) and that of their sons (Column 7) in the various castes—are not significant. An important fact that must be taken note of in this context is that some castes have gained more than the others, even though the advantage is not quite striking. And even more noteworthy is the fact that such differences also follow a recognisable trend. The trend, however, is more discernible in Ghagga and Ghudani Kalan—villages which have undergone a greater degree of economic transformation. It is that, on the whole, the highest castes have gained more in occupational prestige than the lower ones. This evidence leads one to the con-

Table 14

Profile of Occupational Prestige of Castes in Ugala

Caste	*Number of Households with Sons* 1	*Average Prestige of Households with Working Sons* 2	*Total Number of Working Sons* 3	*Average Prestige of Working Sons* 4	*Total Number of Heads of Households* 5	*Average Prestige Score of Heads of Households* 6	*Average Prestige of Total Number of Workers (N=369)* 7
Brahmin	8	3.13	10	3.00	14	3.21	3.08
Rajput	14	4.14	23	4.30	26	4.08	4.16
Bania	5	3.80	12	3.75	14	3.71	3.76
Khatri	10	3.90	14	3.79	22	3.91	3.76
Jat	—	—	—	—	1	6.00	6.00
Goldsmith	3	4.00	4	3.25	3	4.00	3.57
Saini	2	3.50	5	3.00	7	2.86	2.93
Kamboj	5	3.20	9	3.44	20	3.00	3.15
Labana	3	3.67	5	3.60	9	3.00	3.29
Tarkhan	4	2.75	9	3.11	5	2.80	3.00
Nai	2	1.00	3	1.00	2	1.00	1.00
Bazigar	4	2.50	7	2.86	10	2.00	2.21
Mazbi Sikh	3	1.00	5	1.00	6	1.00	1.00
Dhobi/Kahar	7	1.71	11	1.55	13	1.85	1.63
Ramdasia	13	1.54	17	1.53	48	1.13	1.31
TOTAL	83	2.95	134	3.01	200	2.67	2.78

Table 15
Profile of Occupational Prestige of Castes in Ghagga

Caste	*Number of Households with Sons* 1	*Average Prestige of Households with Working Sons* 2	*Total Number of Working Sons* 3	*Average Prestige of Working Sons* 4	*Total Number of Heads of Households* 5	*Average Prestige Score of Heads of Households* 6	*Average Prestige of Total Number of Workers (N=509)* 7
Brahmin	7	3.29	10	3.10	18	2.67	2.72
Bania	12	3.50	17	3.65	36	3.67	3.70
Khatri	2	5.00	2	3.50	12	3.25	3.00
Jat	25	3.72	46	3.76	54	3.48	3.56
Suniar	—	—	—	—	1	5.00	5.00
Rajput	1	2.00	1	2.00	4	3.50	3.20
Kamboj	1	4.00	1	4.00	1	4.00	4.00
Gujjar	1	3.00	1	3.00	3	4.00	3.75
Tarkhan	3	3.00	3	3.00	13	2.77	2.60
Kumhar	4	2.75	10	2.70	6	2.83	2.75
Nai	2	1.00	5	1.40	2	1.00	1.29
Shimba	—	—	—	—	2	2.00	2.00
Bazigar	15	1.00	19	1.21	40	1.15	1.12
Kahar	—	—	—	—	3	1.33	1.33
Ramdasia	29	2.07	46	1.70	50	1.80	1.71
Mazbi Sikh	3	2.00	5	1.60	9	1.56	1.35
TOTAL	105	2.60	166	2.61	254	2.58	2.47

Table 15

Profile of Occupational Prestige of Castes in Ghudani Kalan

Caste	*Number of Households with Sons* 1	*Average Prestige of Households with Working Sons* 2	*Total Number of Working Sons* 3	*Average Prestige of Working Sons* 4	*Total Number of Heads of Households* 5	*Average Prestige Score of Heads of Households* 6	*Average Prestige of Total Number of Workers (N=456)* 7
Brahmin	5	4.29	9	3.33	15	3.60	3.60
Jat	62	3.31	118	3.25	135	3.17	3.25
Bania	—	—	—	—	1	4.00	4.00
Khatri	1	3.00	1	3.00	4	3.00	3.00
Suniar	—	—	—	—	1	3.00	3.00
Nai	1	1.00	3	2.33	8	1.38	1.88
Tarkhan	4	2.75	7	2.57	9	3.22	2.94
Shimba	2	2.00	2	2.00	7	2.00	2.00
Gujjar	—	—	—	—	2	1.50	1.50
Dhobi/Kahar	2	1.00	2	1.00	9	1.89	1.69
Mazbi Sikh	1	1.00	1	1.00	1	1.00	1.00
Ramdasia	24	1.00	37	1.19	50	1.34	1.33
TOTAL	102	2.67	180	2.74	242	2.66	2.76

clusion that the gap in the occupational prestige difference between the higher and the lower castes, as a result of economic changes, has somewhat widened. In other words, the economic inequalities among the castes have increased rather than diminished.

The observation that despite manifold economic changes the relative positions of the castes, in terms of their occupational prestige, have remained almost stable and that the disparities in occupational prestige between the higher castes and the lower castes have tended to increase would lead one to the conclusion that the fruits of economic transformation have gone to the various castes in proportion to their standing in the prestige hierarchy—the higher the occupational prestige of a caste to start with the greater is the benefit derived from the economic changes subsequently. Such a conclusion can be treated as a hypothesis for further testing. This hypothesis may be tested by examining the evidence of the advantages the various castes have actually derived from some of the important economic changes.

Some of the indices of the economic opportunities availed of by the various castes in Ugala, Ghagga and Ghudani Kalan are given in Tables 17, 18 and 19. The indices are: (*i*) The percentage of workers in the formal sector of the economy. As the formal sector, on the whole, provides better economic opportunities as compared with the informal sector, it may be presumed that the higher the percentage of workers in a caste taking advantage of the formal sector, the greater would be the benefit derived. (*ii*) The average score on occupational prestige of members of a caste engaged in the formal sector; the higher the average score the greater the benefit derived. (*iii*) Percentage of workers in a caste commuting to other places for work. As workers commute to outside places of work for better economic opportunities, the higher the percentage of commuters, the greater is the benefit derived. (*iv*) The average score on occupational prestige of commuting workers in a caste group; the higher the average score, the greater is the benefit derived. (*v*) The percentage of migrant sons working outside the village to the total number of sons of the heads of households in a caste. It is again presumed that sons migrate to other places of work for better economic opportunities. Therefore, the higher the percentage of migrant sons in a caste, the greater is the economic benefit derived. (*vi*) The average score on occupational prestige of the migrant sons in a caste; the higher the score, the higher is the benefit derived. The

Table 17

Indices of Economic Opportunities Availed of by the Various Castes in Ugala

Caste	*Percentage of Workers in the Formal Sector* 1	*Average Prestige of Workers in the Formal Sector* 2	*Percentage of Commuting Workers* 3	*Average Prestige of Commuting Workers* 4	*Percentage of Migrant Sons to Total Sons* 5	*Average Prestige of Migrant Sons* 6
Brahmin	26.92	2.43	11.54	2.33	28.57	2.75
Rajput	1.96	3.00	1.96	3.00	20.69	4.00
Bania	13.79	3.75	6.90	4.50	50.00	3.58
Khatri	9.76	3.50	4.88	5.00	46.15	3.00
Jat	100.00	6.00	—	—	—	—
Suniar	37.50	2.33	37.50	2.33	50.00	3.00
Saini	14.29	2.00	—	—	28.57	2.50
Kamboj	2.94	2.00	—	—	10.00	3:00
Labana	7.14	2.00	—	—	50.00	2.00
Tarkhan	21.43	3.00	14.29	2.50	25.00	3.00
Nai	—	—	—	—	25.00	1.00
Bazigar	—	—	—	—	—	—
Mazbi Sikh	—	—	—	—	—	—
Dhobi/Kahar	3.70	3.00	7.41	3.00	—	—
Ramdasia	1.43	2.00	—	—	19.05	4.50
TOTAL	7.86	2.90	4.07	3.93	28.73	3.16

Table 18
Indices of Economic Opportunities Availed of by the Various Castes in Ghagga

Caste	*Percentage of Workers in the Formal Sector* 1	*Average Prestige of Workers in the Formal Sector* 2	*Percentage of Commuting Workers* 3	*Average Prestige of Commuting Workers* 4	*Percentage of Migrant Sons to Total Sons* 5	*Average Prestige of Migrant Sons* 6
Brahmin	15.15	2.80	15.15	3.00	—	—
Bania	8.96	3.67	7.46	4.60	34.62	3.29
Khatri	16.67	4.33	16.67	4.00	71.43	5.00
Jat	8.41	3.44	7.48	2.25	4.17	1.00
Suniar	—	—	—	—	—	—
Rajput	20.00	5.00	—	—	—	—
Kamboj	—	—	—	—	—	—
Gujjar	—	—	—	—	—	—
Tarkhan	—	—	—	—	25.00	2.00
Kumhar	—	—	—	—	—	—
Nai	—	—	—	—	—	—
Shimba	—	—	—	—	—	—
Bazigar	—	—	—	—	—	—
Kahar	—	—	4.35	2.00	—	—
Ramdasia	5.22	2.33	3.48	2.50	2.13	2.00
Mazbi Sikh	10.00	2.00	5.00	3.00	16.67	3.00
TOTAL	7.86	2.58	5.30	3.22	10.27	3.50

Table 19

Indices of Economic Opportunities Availed of by the Various Castes in Ghudani Kalan

Caste	*Percentage of Workers in the Formal Sector* 1	*Average Prestige of Workers in the Formal Sector* 2	*Percentage of Commuting Workers* 3	*Average Prestige of Commuting Workers* 4	*Percentage of Migrant Sons to Total Sons* 5	*Average Prestige of Migrant Sons* 6
Brahmin	32.14	3.78	57.14	3.94	35.71	2.80
Jat	8.87	3.48	11.70	3.67	19.18	2.79
Bania	33.33	3.00	—	—	—	—
Khatri	—	—	33.33	3.00	—	—
Suniar	—	—	—	—	—	—
Nai	—	—	12.50	3.00	66.67	2.17
Tarkhan	—	—	—	—	63.16	2.67
Shimba	12.50	3.00	12.50	3.00	75.00	2.17
Gujjar	—	—	—	—	—	—
Dhobi/Kahar	—	—	7.69	3.00	33.33	1.00
Mazbi Sikh	—	—	—	—	—	—
Ramdasia	5.49	2.80	9.89	2.11	24.49	3.09
TOTAL	9.21	3.43	13.82	3.46	28.00	2.68

influence of the last two factors are not reflected in the occupational prestige of castes shown in the earlier tables.

There is a good deal of similarity in the data presented in Tables 17, 18 and 19. They show that in all the three villages the castes on the higher rungs of the status hierarchy, on the whole, have benefited more from the economic opportunities implied by all the indices. The castes in the middle of the range have derived little or no advantage from the new economic opportunities mainly because of their small numerical size. But wherever they have participated they have benefited more than the lower castes, both in the degree of participation and the average prestige-score.

Among the higher castes, however, those which are engaged in farming generally have taken lesser advantage of the new opportunities as compared with the other castes within their range of status. This is particularly true in the case of Rajputs in Ugala, Jats in Ghagga and Ghudani Kalan and the Brahmins in Ghagga. The advantage taken by the Banias is relatively great in Ugala but somewhat less in Ghagga. The Banias, however, have benefited a great deal from the expanding opportunities in trade which is in the informal sector. Khatris in Ugala and Ghagga seem to be great beneficiaries in terms of these indices. In Ghudani Kalan the Brahmins are the highest beneficiaries.

The Ramdasias and the Mazbi Sikhs in Ghagga and the Ramdasias in Ghudani Kalan (among the lowest section of castes) have shown some response to the expanding economic opportunities, but much below the average. The relatively high average occupational prestige score among the migrant sons of the Ramdasias in Ugala (Table 17, Column 6) is because one person among them is an IAS officer. Since these castes are almost at the bottom, this limited degree of response has not resulted in the improvement of their relative standing in the social structure of the village. In Ghagga these castes have been specially aided by a government scheme of land distribution and house allotment. Even so they have not been able to improve upon the privileges provided to them by the government, by making use of the expanding economic opportunities.

On the whole, therefore, the evidence is very much in conformity with our hypothesis that the fruits of economic transformation have gone to the various castes in proportion to their standing in the prestige hierarchy. The expanding opportunities in trade in Ghagga have been availed of mainly by the Bania and Khatri castes which are the traditional trading castes of the region. Thus the higher castes have benefited more than the lower ones from the transformation of the economy. Because of this peculiar distribution of new opportunities, the relative prestige positions of castes have not been altered for the most part. One major exception, however, is the position of the Jats in Ghagga vis-a-vis the positions of the Banias and the Khatris. Generally, in the agricultural communities of this region the Jats are ranked higher than the Banias and the Khatris as is the case in Ghudani Kalan. But in Ghagga, which is an emerging trading centre, people perceive the growing importance of the trading castes as compared with the cultivating castes. Accordingly, here the Banias and the Khatris are ranked higher than the Jats—a change brought about by the transformation of the economy.

Whatever may have been the consequences of the transformation of the economy in these three villages, they have been in conformity with the social structure which is characterised by the caste system. The rigid and inegalitarian social structure is not showing any signs of changing towards a fluid and more egalitarian social order—although among the higher castes, the trading castes are stealing a march over the agricultural castes. On the contrary the inequalities among the castes are growing. The foregoing analysis makes it clear that social structure is also an important factor in economic adjustment.

6

Economic Change, Social Structure and Family Size

Even scholars who have formulated economic decision-making models about fertility behaviour are not unmindful of sociological variables. However, in the study of the relationship between economic development and population growth, they have regarded such variables as intervening ones (Mueller, 1975: 308). So they have not related them either to population growth or to economic development. This investigation relates the caste structure, an important social structural variable, to both economic development and population growth.

It has been shown in Chapter 5 that when economic development (economic transformation) takes place the caste system does not simply act as a dependent variable, bending to the influence of the former. On the contrary, it channels economic changes according to its own pattern. The caste system acts as a tangible force in apportioning the advantages of economic development to members of different castes in a differential manner.

For present purposes, when we are concerned with the relationship between population and development, the opportunities for social mobility or status maintenance provided by economic development are important. In the economic decision-making models also, status maintenance is included as a relevant variable but it applies to the status security of the parents. But when we assume that children constitute not merely the utility values but also the affective ones to their parents, the latter would be equally concerned with the status security of their children, at any rate in traditional Indian society. Therefore, one of the basic assumptions in our analysis of fertility behaviour is that decisions about the size of the family are governed, among other factors, by considerations of the opportunities of status maintenance for children. Just as parents may desire more children to enable them to maintain their own status, the fear that the children might not be able to live up to the status of their parents would be a deterrent to having a large family.

Insofar as opportunities for mobility provided by economic development are channelled through the caste system, the latter is therefore bound to influence fertility behaviour. Our major hypothesis would be that members of the castes which have better opportunities of status maintenance for their children will have larger families than those of castes which have fewer opportunities.

For this analysis the variable of economic adjustment will be taken as an index of status maintenance. Economic adjustment is a relatively slow process and the influence of a causal factor (such as the size of one's family of orientation) on economic adjustment may be felt after the lapse of several years. For operational purposes economic adjustment may be measured through the criterion of inter-generational occupational mobility, which is also a long process. Those who have improved upon their fathers' occupational prestige, or at least have not fallen below it, may be regarded as persons who are successful in economic adjustment. Those who have fallen below their father's rank may be treated as unsuccessful persons in this respect.

In our analysis, therefore, we would be mainly concerned with viewing the relationship between the type of inter-generational occupational mobility and the size of the family in the various castes which have benefited from the developmental process in different degrees. However from the perspective of cause and effect relationship, the relationship between the type of inter-generational occupational mobility and the size of the family, may be viewed from two different angles—first, by regarding the size of the family as an independent variable and the type of inter-generational mobility as the dependent one, and second, by regarding the former variable as the dependent one and the latter as the independent one.

Since we have obtained information about the size of the family and occupational prestige in respect of the generations of the heads of households and of their fathers, both the earlier mentioned kinds of causal relationships can be examined. The effect of the size of the family upon economic adjustment can be seen by relating the size of the family of orientation of the heads of the household (i.e., the family of the father of the head of the household) with the type of occupational mobility of the head of the household as compared with the occupational prestige of his father. On the other hand, the effect of the type of economic adjustment upon the size of the family can be gauged by relating the inter-generational occupational mobility of the head of the household (as compared with his fathers' occupation) with the size of his own family (family of procreation). In other words, the relationship between the inter-generational occupational mobility of the head of the household and his family of orientation on the one hand, and the size of his family of procreation on the other, give us the indicators of the effect of the size of the family upon economic adjustment on the one hand, and the effect of economic adjustment upon the size of the family on the other.

Since data are also available on the economic adjustment of the sons of the heads of households, the influence of the size of the family upon economic adjustment can be studied further by relating the size of the family of the heads of the households with the economic adjustment of their sons.

Influence of the Size of the Family on Economic Adjustment

The influence of the size of the family on economic adjustment may be examined first by taking into consideration the average size of the family of orientation of the heads of the households in our sample in the three villages according to the type of mobility. The data are presented in Table 1 which also gives information for all the larger castes having more than 10 households in the sample. The smaller castes are lumped together under the 'miscellaneous' category in every village as small numbers are not statistically significant.

We should take note of some of the broad features of the Table before we attempt a detailed analysis. Despite their differential rates of growth of population, the mobility patterns in the three villages are broadly comparable as the information in Table 2 (summarised from Table 1) shows.

What is interesting to note from the figures in Table 2 is that the differences noticeable in the mobility patterns go counter to our major hypothesis—according to which small size families make for better economic adjustment. Ghagga—the village which has the largest average size of family of orientation—also has the higher percentage of upwardly mobile subjects whereas Ghudani Kalan—which has the smallest average size of family of orientation—has the lowest percentage of upwardly mobile persons among the three

Table 1

Average Number of Children of Fathers of Heads of Households in Ugala, Ghagga and Ghudani Kalan

Name of Village/Caste	*Type of Occupational Mobility*						*Total*	
	Upward Mobility		*No Mobility*		*Downward Mobility*			
	No. of Cases	*Average No. of Children*	*No. of Cases*	*Average No. of Children*	*No. of Cases*	*Average No. of Children*	*No. of Cases*	*Average No. of Children*
Ugala								
Brahmin	5	3.20	6	4.50	2	7.50	13	4.46
Rajput	1	5.00	9	3.56	16	4.56	26	4.23
Bania	2	7.00	9	4.89	3	5.00	14	5.21
Khatri	4	5.00	8	5.75	9	5.33	21	5.43
Kamboj	4	6.50	6	5.17	10	5.10	20	5.40
Dhobi/Kahar	4	5.50	6	2.83	3	3.33	13	3.77
Bazigar	1	5.00	6	6.33	3	8.33	10	6.80
Ramdasia	3	5.00	43	5.40	2	7.50	48	5.46
Miscellaneous	6	3.83	24	4.75	3	4.33	33	4.55
TOTAL	30	4.87	117	4.97	51	5.20	198	5.01

Ghagga								
Brahmin	4	5.50	10	5.90	4	6.75	18	6.00
Bania	9	3.67	18	5.89	9	5.33	36	5.19
Khatri	3	5.33	4	6.75	5	6.80	12	6.42
Jat	3	6.33	17	3.06	34	5.18	54	4.57
Tarkhan/Blacksmith	1	7.00	11	5.27	1	8.00	13	5.62
Bazigar	3	7.00	34	5.35	3	5.00	40	5.45
Ramdasia	16	4.63	25	5.52	9	5.56	50	5.24
Miscellaneous	8	5.88	17	5.53	6	5.33	31	5.58
TOTAL	47	5.04	136	5.28	71	5.49	254	5.30
Ghudani Kalan								
Brahmin	5	4.20	5	5.60	2	5.50	12	5.00
Jat	7	3.00	54	3.54	62	4.74	123	4.11
Ramdasia	7	5.00	41	4.63	2	6.00	50	4.72
Miscellaneous	8	5.00	26	3.92	5	6.40	39	4.56
TOTAL	27	4.48	126	4.05	71	4.92	224	4.38

Table 2
Mobility Patterns in Ugala, Ghagga and Ghudani Kalan

Village	*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total Number = 100%*
	Number	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*	
Ugala	30	15.15	117	59.09	51	25.76	198
Ghagga	47	18.51	136	53.54	71	27.95	254
Ghudani Kalan	27	12.05	126	56.25	71	31.70	224

villages. The explanation for these unexpected trends may be found in the fact that both Ugala and Ghagga have provided better economic opportunities, first by making available evacuee land and, second, by effecting a greater degree of economic transformation which is true especially of the latter village. It would appear from this information that the constraints placed by the large size of the family on successful economic adjustment can be overcome by taking advantage of the growing economic opportunities.

However, when we examine the average size of the family of orientation of the subjects who have experienced different kinds of inter-generational mobility it becomes clear (from the row totals of different villages shown in Table 1) that our major hypothesis is sustained. In every village the average size of the family of orientation of downwardly mobile persons is the largest. On the other hand, the average size of the family in the category of upwardly mobile persons is the lowest in Ugala and Ghagga; the smallest size of the family of orientation in Ghudani Kalan, however, belongs to the category of immobile persons who can also be treated mostly as economically successful persons.

Although the aggregate trends are consistent with our major hypothesis, they do not constitute conclusive evidence in support of it as the differences among the average sizes of families in different categories of mobility types are not sufficiently high. The reason for this may be found in the fact that the relationship between family size and economic adjustment is not uniform in the different castes in every village. This lack of uniformity may be largely attributed to the fact that the different castes have availed themselves of the fruits of economic development in different degrees (as has already been shown in Chapter 5).

The fact that the different castes have benefited from economic development in varying degrees is also reflected in the mobility patterns of different castes in every village. Relevant figures in Table 1 have been converted into percentages in Table 3 for the convenience of comparison. The percentages in the case of different categories of castes, however, have to be interpreted differently. The castes in Tables 1 and 3 have been broadly arranged in a hierarchy of status which also roughly corresponds with the occupational prestige of their members—the higher castes by and large follow occupations of higher prestige and the lower ones, those of lower prestige. Accordingly the mobility patterns have different meanings of economic adjustment for the different sets of castes. In the case of the higher castes not only upward occupational mobility but even immobility may signify successful economic adjustment. On the other hand, in the case of the lowest group of castes whose members generally fill occupations of the lowest prestige, lack of mobility would also imply unsuccessful economic adjustment; it is in most cases upward mobility alone which can be taken to mean successful economic adjustment on their part. The situation with regard to the intermediate castes is somewhat ambivalent in this respect.

For our analysis here, the Brahmin, Rajput, Bania and Khatri caste groups in Ugala, the Brahmin, Bania, Khatri and Jat castes in Ghagga and the Brahmin and Jat groups in Ghudani Kalan may be treated as higher castes; the Kamboj and Dhobi/Kahar in Ugala and Tarkhan in Ghagga may be regarded as intermediate castes and the Bazigars, who are found in Ugala and Ghagga, and the Ramdasias (present in all the villages) may be considered lower castes.*

We may now evaluate broadly the nature of economic adjustment taking the castes as units. Judging from the mobility pattern of the village as a whole, we find that in every village the higher castes are generally characterised by a higher degree of mobility—both upward and downward—as compared with the lower castes. This trend is due to the obvious reason that the chances of both upward and downward mobility are greater among the groups following occupations at the intermediate and higher levels of prestige.

Among the higher castes, the Brahmins in all the three villages have achieved successful economic adjustment, much better than

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* The intermediate castes come under the government nomenclature of Backward Class and the lower castes under Scheduled Castes.

Table 3

Percentage Distribution of Heads of Households in Ugala, Ghagga and Ghudani Kalan

Name of Caste	*Upward*	*Immobile*	*Downward*	*Total*
		Ugala		
Higher Castes				
Brahmin	*38.46*	46.16	15.38	100
Rajput	3.84	34.61	*61.55*	100
Bania	14.28	*64.30*	21.42	100
Khatri	*19.04*	38.10	*42.86*	100
Intermediate Castes				
Kamboj	*20.00*	30.00	*50.00*	100
Dhobi/Kahar	*30.76*	46.16	23.08	100
Lower Castes				
Bazigar	10.00	*60.00*	30.00	100
Ramdasia	6.25	*89.58*	4.17	100
Miscellaneous	18.18	72.73	9.09	100
TOTAL	15.15	59.09	25.76	100
		Ghagga		
Higher Castes				
Brahmin	*22.22*	*55.56*	22.22	100
Bania	*25.00*	50.00	25.00	100
Khatri	*25.00*	33.33	41.67	100
Jat	5.56	31.48	*62.96*	100
Intermediate Caste				
Tarkhan	7.69	*84.62*	7.69	100
Lower Castes				
Bazigar	7.50	*85.00*	*7.50*	100
Ramdasia	*32.00*	50.00	18.00	100
Miscellaneous	25.80	54.85	19.35	100
TOTAL	18.90	53.15	27.95	100
		Ghudani Kalan		
Higher Castes				
Brahmin	*41.67*	41.67	16.66	100
Jat	5.69	43.90	*50.41*	100
Lower Castes				
Ramdasia	14.00	*82.00*	4.00	100
Miscellaneous	20.51	66.67	12.82	100
TOTAL	12.05	56.25	31.70	100

the average. The Banias, too, both in Ugala and Ghagga (where they are present in substantial numbers) have shown better than average adjustment. The Rajputs in Ugala and the Jats in Ghagga and Ghudani Kalan, who are dominant cultivating castes, have been least successful in economic adjustment. In their respective villages they have achieved the least degree of upward mobility and have experienced the highest degree of downward mobility among all the castes. The economic adjustment of the Khatris, both in Ugala and in Ghagga where they are present, is of a peculiar nature; in each village it is characterised by a higher than average degree of upward mobility as well as a higher than average downward mobility. The Khatris, who generally follow non-agricultural occupations, are a predominantly agricultural caste in Ugala. Hence its relatively high degree of downward mobility in this village may be attributed to this fact. However, there is no ready explanation for the similar phenomenon in Ghagga.

The Brahmins and Banias, on the whole, have benefited more from economic changes. The Banias are the chief beneficiaries from the growth of trade in Ugala and Ghagga, especially in the latter, and the Brahmins are the chief beneficiaries from the growth of tertiary employment in Ghudani Kalan.

The mobility pattern of the lower castes at the other extreme, as already mentioned, is characterised by a low degree of mobility—both upward and downward. They are very immobile. Such a situation signifies unsuccessful economic adjustment. All the same there are some differences among the lower castes themselves, which are worth noticing. For example, among them the Bazigars in Ugala (as compared with their caste-fellows in Ghagga) and the Ramdasias in Ghagga (as compared with their counterparts in Ugala and Ghudani Kalan) have shown a greater degree of mobility. Interestingly, in both these cases the mobility-prone castes are economically better off as compared with their more immobile counterparts in the other villages.

The mobility patterns of the intermediate castes in Ugala have more in common with those of the higher castes. However, in Ghagga, in the case of the Tarkhans, it follows the trend visible among the lower castes.

With the foregoing clarifications we may now return to Table 1 to examine the varying kinds of relationship between size of the family of orientation and the type of occupational mobility among the various castes. Among the higher castes, first, the hypothesised relationship holds good in the case of the Brahmins and the Rajputs (if we exclude the odd case of upward mobility among the Rajputs) in Ugala, in the case of the Brahmin, Khatri and Jat (again with the exception of 3 upwardly mobile subjects*) in Ghagga and the Jats in Ghudani Kalan. On the other hand, in the case of the Banias and Khatris in Ugala, the Banias in Ghagga and the Brahmins in Ghudani Kalan the particular relationships are not in conformity with our general hypothesis. It is precisely these castes where economic adjustment is not fettered by the size of the family, which have benefited more from economic opportunities. As has already been pointed out, the Banias in both the villages have taken advantage of the growing trade and the Brahmins in Ghudani Kalan have taken advantage of the growing tertiary sector activities. The Khatris in Ugala, along with the Kambojs and a few others, have taken advantage of the evacuee land. All these castes also have relatively large families of orientation among the higher castes.

The dominant cultivating castes (such as the Rajputs in Ugala and the Jats in Ghagga and Ghudani Kalan) which are strongly affected by the size of the family of orientation in economic adjustment have the smallest size family of orientation among the higher castes in their respective villages. It has already been pointed out that they have experienced the highest degree of downward mobility in their respective villages.

None of the intermediate castes conform to our major hypothesis dealing with the relationship between the size of the family of orientation and the type of economic adjustment. The Kambojs in Ugala have taken advantage of the availability of land, which seems to have softened the adverse effect of the size of the family on economic adjustment; the Tarkhans in Ghagga have remained immobile for the most part; and the Dhobi/Kahar castes been mobile at the lower levels where the size of the family is immaterial unless land is involved. The average size of the family of orientation among the Dhobi/Kahar castes is also the lowest among all the castes in their village.

Among the lower castes, only in the case of the Bazigars in Ugala and the Ramdasias in Ghagga is there consistency with our hypothesis. The broad trend in the case of the Ramdasiąs in Ugala is also consistent but the proportion of the subjects experiencing mobility in this case is insignificant. The Bazigars in Ugala and the Ramdasias in Ghagga who have shown consistent relationships have small cultivators among them in appreciable proportions. It is their relatively enhanced economic conditions which have rendered their economic adjustment vulnerable to the size of the family. But the initial mobility of these castes is due to the land settlement schemes of the government. Thus it may be assumed that among the lower castes the size of the family becomes instrumental in their economic adjustment only when they have made some initial economic gains.

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* Of the 4 upwardly mobile subjects 2 belong to families of orientation with 8 members each. But their upward mobility is due to peculiar circumstances. One of them inherited a large plot of land from his wife's family, which was responsible for his mobility. The other rose by acquiring education through individual effort.

Some broad conclusions may be drawn from the data presented in Table 1. There is an association between the size of the family of orientation and the type of economic adjustment of the respondents. But such a relationship is mediated through the social structure which is also an important factor in the distribution of economic opportunities. Since occupational mobility is greater among the higher castes, it is the members of these castes who are more affected in their economic adjustment by the size of their family of orientation. But even among these castes, those who have benefited most from the new economic opportunities have been affected the least; on the other hand, the major landowning and cultivating castes which have not availed themselves of the expanding economic opportunity have been most adversely affected by the large size of the family of orientation. The size of the family of orientation has not affected the intermediate category of castes much. But among the lowest castes, those which are economically somewhat advanced because they own some land, have been adversely affected by the larger size of the family; those lower castes which are at the bottom of the economic ladder are not affected by the size of the family. It is mainly those castes which stand to lose very much economically by having large families which have shown a tendency to reduce the size of their families. Consequently, the landowning and cultivating castes which are most affected by the growth of population have also limited the size of their family to a greater extent. The trading castes, on the other hand, who are the chief beneficiaries from the expanding economic opportunities tend to have larger families.

The influence of the size of the family of orientation upon economic adjustment may now be examined by relating the size of

Table 4

Type of Occupational Mobility of Sons (Including those Living Outside for Work) and the Average Number of Living Children of Heads of Households

Caste	*Upward Mobility*		*No Mobility*		*Downward Mobility*		*Total*	
	No. of Cases	*Average No. of Children*	*No. of Cases*	*Average No. of Children*	*No. of Cases*	*Average No. of Children*	*No. of Cases*	*Average No. of Children*
Ugala								
Brahmin	2	4.00	8	5.25	4	6.75	14	5.50
Rajput	3	3.67	18	5.50	6	6.83	27	5.59
Bania	5	7.80	7	6.29	12	6.50	24	6.71
Khatri			18	6.00	8	7.38	26	6.42
Dhobi/Kahar			9	6.44	2	7.00	11	6.55
Ramdasia	5	6.00	13	6.46	3	5.33	21	6.19
Miscellaneous	4	5.50	49	6.14	9	5.56	62	6.02
TOTAL	19	5.79	122	5.97	44	6.48	185	6.11

Ghagga								
Brahmin			9	6.44	1	1.00	10	5.90
Bania	2	5.00	13	7.23	9	6.67	24	6.75
Jat	1	5.00	45	5.84	1	7.00	47	5.85
Dhobi/Kahar			7	6.14	3	6.33	10	6.20
Bazigar	2	6.00	17	6.47			19	6.42
Ramdasia	3	7.67	30	5.60	14	7.07	47	6.17
Miscellaneous	5	6.60	12	6.33	8	6.88	25	6.56
TOTAL	13	6.38	133	6.09	36	6.69	182	6.22
Ghudani Kalan								
Jat	11	4.46	108	5.08	20	4.45	139	4.94
Ramdasia	13	4.69	34	4.44	1	8.00	48	4.58
Miscellaneous	12	5.42	27	4.85	14	4.50	53	4.89
TOTAL	36	4.86	169	4.92	35	4.57	240	4.86

the family of the heads of the households with the inter-generational mobility of their sons. The family of orientation of the sons is the same as the family of procreation of the heads of the households. Just as the life-chances of the heads of the households have been affected by the size of their family of orientation the size of their own family of procreation cannot but influence the life-chances of their own sons.

For our analysis here, I have considered all the sons of the heads of the households who are in the working force, including those who are migrants. In all there were 185, 182 and 240 such cases in Ugala, Ghagga and Ghudani Kalan respectively. Table 4 shows their distribution according to the type of their mobility and average size of the family of their orientation which is the family of procreation of their fathers. In each village the distribution is shown according to caste break-up in the case of castes with more than 10 subjects.

Families with working sons can be, by and large, considered to have been completed and so the average sizes of families in different categories become comparable. But the mobility patterns of the subjects who are in younger age groups cannot be said to have been properly formed. Many of the subjects are still living with their parents, sharing the family farm or business. It is too early to say how well they would fare in relation to their father's status when eventually some of them would be launching out on their own. Since this kind of immobility is more common in some castes than in others, the data for different castes may not be strictly comparable.

Despite their limitations, the data presented in Table 4 do indicate some broad trends in Ugala and Ghagga which are consistent with our major hypothesis—that the persons belonging to smaller families of orientation have better chances for achieving successful economic adjustment. In both these villages, subjects who have experienced downward occupational mobility belong to the largest average size of the family of orientation at the aggregate level. The effect of the family size on economic adjustment at the aggregate level however is not very impressive because of the variation of this effect among the different castes. This variation also roughly corresponds with the variation in the case of the adjustment of the heads of households (shown in Table 1). Accordingly, we find that in Ghagga among the Brahmin, Rajput, Khatri and Dhobi/Kahar castes, the trend is consistent with our hypothesis but among the Banias, who have been gaining from the new opportunities, there is no consistent trend. This is also the case with the Ramdasias but for different reasons related to their position at the bottom of the occupational ladder.

In Ghagga the relationship between family size and economic adjustment has been somewhat blurred because of the fact that the sons of the heads of the households among the Brahmins and the Jats (both of which are agricultural castes) have experienced hardly any mobility and it is these castes which are usually vulnerable to the size of family in economic adjustment. Among the Ramdasias who have experienced considerable mobility, those who have experienced both upward and downward mobility belong to larger average sizes of family of orientation as compared with those who are immobile; but the proportion of persons who have moved upwards is negligible. The Banias (as in the case of their counterparts in Ugala) are not affected by the size of family in economic adjustment.

Whereas the trends in Ugala and Ghagga would tend to support the relationship between family size and economic adjustment, in Ghudani Kalan there appears to be no such relationship even in the case of the cultivating caste of the Jats. In this village the Jats have started taking increasing advantage of the new economic opportunities and are no longer constrained by limited land for economic adjustment as before. Hence it would appear that the relationship between the size of the family and economic adjustment has weakened in their case. Even the average size of the family of procreation of the heads of the households among the Jats has grown more than the average for the village whereas the size of their family of orientation was smaller than the average for the village.

Relationship between Landownership Pattern and the Number of Brothers Inheriting Land

One of the major observations from the data presented in Table 1 is that the major landowning and cultivating castes have been most adversely affected in their economic adjustment by population growth. The reason for such a state of affairs is not difficult to visualise. The cultivators in this study have been divided into large, medium and small cultivators on the basis of landownership. Inasmuch as most of the landed cultivators inherit their land from their fathers, several brothers inheriting land from the same father will end up having pieces of land smaller than their father's, thus experiencing downward mobility as culivators. Some farmers may avert multiple inheritance of land by preparing their additional sons for non-agricultural occupations, or some sons may recoup the loss through multiple inheritance, by buying more land, and so on. But on the whole the larger the size of the family of orientation the smaller the estate owned by the respondent. Since agricultural land in the region of this study is usually transferred to the sons, the foregoing proposition may be worded thus: 'The larger the number of brothers inheriting land from their father, the smaller is their share.'

It is sufficient for our purpose to divide the land owned by the respondents into three categories in relation to the land owned by their fathers: (*a*) own less land compared to their father, (*b*) own the same area as owned by their father, and (*c*) own more land compared to their father. Accordingly, it may be hypothesised that the respondents who own less land compared to their fathers are more likely to have a larger number of brothers than the respondents who have the same or larger area compared to their father.

This hypothesis may be tested by taking into account only those heads of households in our sample who owned land either in their own generation or in the generation of their father or in both the generations. There are in all 113, 130 and 140 such cases in Ugala, Ghagga and Ghudani Kalan respectively. Their landownership pattern in relation to the landownership of their fathers is shown in Table 5. Invariably, in every village the majority of the subjects own less land as compared with their father. However this majority is somewhat smaller in Ugala where a higher degree of land transaction has taken place because of evacuee property and immigration. Some of the cultivating castes in this village—such as, Khatri, Kamboj, Saini and Labana—are immigrants into this village, who have acquired land in recent decades.

The fact that the majority of the landowning respondents possess less land as compared with their fathers would indicate that the average size of landholding is bound to reduce with each generation. The table further shows that the reduction in the size of estates of the respondents, as compared with those of their fathers, is mainly due to multiple inheritance. In every village, the average number of sons of the fathers of the respondents with relatively smaller estates is substantially larger than that of the fathers of the respondents who have not suffered a loss in the size of their estate.

Table 5

Land Owned by the Head of Household in Relation to that Owned by his Father and the Number of Sons of the Father

Land Owned by Head of the Household	No. of Sons of Father							Total No. of Households	Average No. of Sons
	1	*2*	*3*	*4*	*5*	*6*	*7*		
Ugala									
Less than that of father	6	13	15	21	5	6		66	3.36
Same as that of father	6	4	1	2	2			15	2.33
More than that of father	9	6	5	8	3	1		32	2.78
TOTAL	21	23	21	31	10	7	—	113	3.06
Ghagga									
Less than that of father	11	24	28	17	11	4	1	96	3.09
Same as that of father	9	3	2	2		1	1	18	2.33
More than that of father	3	7	1	5				16	1.56
TOTAL	23	34	31	24	11	5	2	130	2.92
Ghudani Kalan									
Less than that of father	4	37	30	12	14	2	2	101	3.09
Same as that of father	21	8	3	3	1			36	1.75
More than that of father		1	1	1				3	3.00
TOTAL	25	46	34	16	15	2	2	140	2.74

The foregoing evidence clearly shows that the larger size of the family of orientation, by giving rise to multiple inheritance of agricultural land, is an important cause of economic maladjustment of the major cultivating castes. In their case, population growth has a more far-reaching impact on economic adjustment as compared with the non-cultivating castes.

Influence of Economic Adjustment on the Size of the Family

Having considered the influence of the size of the family on economic adjustment it is now in order to analyse the effect of economic adjustment on the size of the family. As already pointed out, the families considered in the two kinds of analyses are different. In the former kind of analysis (in which the size of the family is regarded as the independent variable) we examined the relationship between the economic adjustment of the subjects and their family of orientation. In the present analysis (in which economic adjustment is regarded as an independent variable and family size as the dependent one) we would be studying the relationship between the economic adjustment of the subjects and their family of procreation. It can be readily seen that in their time sequence the family of orientation of the subject, by and large, precedes his economic adjustment and the family of procreation follows it, and such a sequence of events justifies our making the particular causal inferences.

With a view to understanding the nature of influence of economic adjustment upon the size of the family, the heads of the households are distributed in Table 6 according to the type of their economic adjustment and the size of their family of procreation, in the three villages separately. The caste break up, as in the previous analysis, is shown only in the case of larger castes with more than 10 households in the sample.

The data presented in Table 6, however, have an important limitation inasmuch as the families of procreation of the heads of the households have not been completed in some cases. This becomes obvious when we compare the family sizes in Table 6 with the sizes of families in Table 4, which takes into account only those heads of the households who have working sons and hence who may be considered to have realised the full size of their families. The family sizes in Table 4 are naturally much larger than their counterparts in Table 6. There is, however, a broad consistency in the relative order of family sizes of the various castes in the different villages, when the two tables are compared. A serious exception to this trend is the relative positions of the Jats and the Ramdasias in Ghudani Kalan with regard to their family sizes; in the case of the completed families (Table 4) the Ramdasias have smaller families as compared with the Jats, but in the case of the total number of households (Table 6) the ranks of these two castes are reversed. It is just possible that the trends among the younger heads of households have begun to change.

Even though the data presented in Table 6 on family size are of a coarse nature they show some consistent and significant trends. When we consider the overall picture we find that in Ugala and Ghagga the heads of the households with successful economic adjustment have larger families than those with unsuccessful adjustment, but in Ghudani Kalan the trend is reversed.

When we examine the relationship between the given variables in the various castes in Ugala and Ghagga we find that the association between adverse economic adjustment and small size of the family is found mainly among the Rajput, Khatri and Ramdasia castes in Ugala, and among the Jat and Ramdasia castes in Ghagga. Barring the Ramdasias in Ugala, whose mobility is negligible in any case, the rest are all landowning and cultivating castes. However, not all cultivating castes have shown this kind of relationship. The glaring exception is the caste of Kamboj in Ugala. But the Kamboj happen to have the smallest average size of the family in the village.

An interesting point which becomes obvious from these findings is the fact that it is more or less the same castes in which the average size of the family of orientation is relatively small, which also have a relatively small average size of the family of procreation. But whereas in the case of the family of orientation persons with successful economic adjustment came from smaller families, in the case of the family of procreation it is the persons with adverse economic adjustment who have reduced the size of their family. These results generally agree with the observation that castes with a greater degree of unsuccessful economic adjustment as a whole tend to have smaller families, as in the case of the cultivating castes. On the other hand, castes with a greater degree of successful adjustment as a whole tend to have larger families, as in the case of Banias among the higher castes. Moreover it is also among the castes with better economic adjustment on the whole that the association between adverse economic adjustment and small family size does not hold good. In this manner the socio-economic environment of the group is also an important factor in the fertility behaviour of the individuals.

In Ghudani Kalan, where the overall trend is different from that in the other two villages, the difference is caused mainly by the situation of the Jats who are the largest caste in the village. Among the Jats the average size of the family of procreation of the downwardly mobile persons is larger; the family of orientation, too, is larger in their case. Therefore in the case of the Jats it cannot be said that the experience of adverse economic adjustment has influenced the size of their family. But the group environment of unfavourable economic opportunities seems to have affected the overall fertility behaviour inasmuch as the Jats in Ghudani Kalan have the smallest size of the family of procreation, in the same way they also have the smallest size of the family of orientation.

The fact that in Ghudani Kalan, in the case of the Brahmins also

Table 6

Average Number of Children of Heads of Households by Caste and Type of Occupational Mobility

Name of Village/Caste	*Type of Occupational Mobility*						*Total*	
	Upward Mobility		*No Mobility*		*Downward Mobility*			
	No. of Cases	*Average No. of Children*	*No. of Cases*	*Average No. of Children*	*No. of Cases*	*Average No. of Children*	*No. of Cases*	*Average No. of Children*
Ugala								
Brahmin	5	4.00	6	4.00	2	4.50	13	4.08
Rajput	1	9.00	9	5.00	16	3.69	26	4.35
Bania	2	6.50	9	5.67	3	6.00	14	5.86
Khatri	4	5.00	8	6.25	9	3.22	21	4.71
Kamboj	4	4.25	6	3.17	10	4.00	20	3.80
Dhobi/Kahar	4	4.50	6	4.83	3	4.67	13	4.69
Bazigar	1	6.00	6	3.83	3	7.33	10	5.10
Ramdasia	3	5.67	43	4.40	2	3.50	48	4.44
Miscellaneous	6	4.50	24	5.33	3	4.67	33	5.12
TOTAL	30	4.90	117	4.77	51	4.16	198	4.63

Ghagga								
Brahmin	4	3.50	10	4.00	4	3.50	18	3.78
Bania	9	3.33	18	5.44	9	3.44	36	4.42
Khatri	3	4.67	4	2.25	5	5.60	12	4.25
Jat	3	4.00	17	4.82	34	3.94	54	4.28
Tarkhan/Blacksmith	1	4.00	11	4.45	1	0.00	13	4.08
Bazigar	3	1.67	34	5.12	3	3.00	40	4.70
Ramdasia	16	6.75	25	4.04	9	3.89	50	4.88
Miscellaneous	8	3.63	17	3.88	6	4.17	31	3.87
TOTAL	47	4.63	136	4.56	71	3.89	254	4.39
Ghudani Kalan								
Brahmin	5	4.20	5	2.80	2	5.50	12	3.83
Jat	7	3.57	54	3.35	62	3.92	123	3.65
Ramdasia	7	2.71	41	4.15	2	3.50	50	3.92
Miscellaneous	8	2.88	26	4.31	5	2.80	39	3.82
TOTAL	27	3.26	126	3.79	71	3.87	224	3.75

the family size of the economically unsuccessful persons is larger, is in accordance with what we would expect considering that the Brahmins in this village are riding the crest of the wave of new economic opportunities.

Attention may be focused on the Scheduled Castes in the three villages—namely, the Bazigars and Ramdasias in Ugala and Ghagga and the Ramdasias in Ghudani Kalan—whose family size is usually larger than the average for the village. One of the explanations for such a state of affairs is that since they already occupy the lowest socio-economic position, the size of their family cannot make it worse. All the same it is instructive to consider the case of Ramdasias in Ghagga whose economic condition is better than that of other Scheduled Castes. Among them a considerable proportion of the heads of households have experienced downward mobility and, as we would expect, the average size of family of procreation in their case is the smallest.

Further, in consonance with the general trend in the village, as a whole the average size of the family of the Scheduled Caste of Ramdasias in Ghudani Kalan is the smallest as compared with the Scheduled Castes in the other two villages which have a larger average family size—a fact which emphasises the influence of the socio-cultural environment of a community on fertility.

On the whole, the evidence from Table. 6 would snow that in castes which have suffered a general economic deterioration, the members who have experienced adverse economic adjustment have reduced their family size whereas no such behaviour is markedly visible in castes which have generally benefited more from economic opportunities.

Implications of the Findings of the Two Kinds of Causal Analysis

The main results of the two kinds of causal analysis of the relationship between economic adjustment and the size of the family may now be summarised so as to draw some implications. First, the overall economic adjustment in different castes in every village follows different patterns. Economic adjustment of members is much better in some castes than in others because of the fact that economic change has been channelled through the caste structure. In the villages which have gained in trade, the traditional trading castes have had better opportunities for successful economic adjustment, and in the village which has grown in service activities the caste of Brahmin with a head-start in education has benefited the most. The economic adjustment of the cultivating castes has suffered the most through multiple inheritance of land. If the lower castes have not felt the threat of downward occupational mobility it is because they are already at the bottom.

Second, the degree of overall economic adjustment of the caste groups has served as a contingent factor in the relationship between economic adjustment and family size of individuals. In castes manifesting adverse economic adjustment on the whole, the larger size of the family of orientation leads to unsuccessful economic adjustment of the individual, whereas such a relationship becomes weaker in the castes with better economic adjustment on the whole. The modifying effect of the overall economic adjustment of caste groups holds good even when we consider the effect of economic adjustment on family size. It is found that in the case of castes with more unfavourable economic adjustment, individuals with unsuccessful economic adjustment have smaller families of procreation as compared with those having better adjustment. It may be emphasised that in castes with generally unfavourable economic adjustment, whereas the large size of the family leads to unsuccessful economic adjustment, it is the persons with unsuccessful economic adjustment who beget smaller families.

The above-mentioned findings lead to the following conclusions: In the absence of economic growth and hence the lack of economic opportunities, the large size of the family of orientation gives rise to economic maladjustment of its members. Economically maladjusted persons are likely to reduce the size of their family of procreation as compared with the size of the family of orientation. Thus the net result of a lack of growth in the economy would be a slower rate of growth of population.

On the other hand, with the increase in economic opportunities members coming from even large families can manage to achieve successful economic adjustment and such persons, in a climate of economic boom, tend to beget children with abandon. Consequently, economic growth fosters a rapid growth of population.

Therefore when the fruits of economic growth are differentially distributed among the different sections of the population, the different sections would be prone to manifest differential rates of growth of population.

In the peculiar relationship between economic change and population growth outlined earlier, the social structure plays a crucial role. First, it channels economic change according to its own pattern so that persons belonging to certain sections benefit more than those belonging to certain other sections. Second, it modifies the fertility behaviour of persons experiencing the same kind of economic adjustment but belonging to different sections. A proper appreciation of the role of social structure in economic change and population growth is, therefore, important for a correct interpretation of the relationship between the last two variables, which is a matter of great concern in the context of the demographic transition.

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Social Mobility, Family Planning and Family Size

The data regarding the size of the family reveal certain consistent patterns, which indicate the influence of socio-cultural norms and economic constraints on family size. Even when the average family size is markedly larger in Ugala and Ghagga than in Ghudani Kalan, the patterns hold good both in the case of the family of orientation and of the family of procreation of the heads of the households in all the villages. Similarly, more or less the same pattern of variation in the family sizes of the various castes in a village holds good over the generations. In short, there is unmistakable evidence showing a relationship between mobility pattern and family size. But the actual family size is generally known to be directly related to the ideal (preferred) family size as well as to the level of adoption of family planning methods, which may be regarded as the intervening variables in the relationship between mobility pattern and family size.

It is assumed that the family-size preference will be influenced by the socio-economic and cultural factors and the achieved family size would be influenced by the ideal family-size. On the other hand, the regulation of the size of the family would be achieved through the adoption of family planning methods. We would be particularly interested in knowing how far caste difference and the occupational mobility pattern are relevant factors in family-size preference and the adoption of family planning methods.

Ideal Family-size

The wives of the heads of the households were asked to state how many children should an ideal family have and what should be the composition of such a family in terms of boys and girls. The results are presented in Tables 1a, 1b and 1c for the three villages. It is surprising that despite the marked differences among the three villages in other respects, the differences in the average of the ideal size of the family are not at all significant although Ghudani Kalan (which has the smallest achieved family size) also shows the smallest ideal family-size. The family-size preference seems to have been influenced by two general considerations in every village—first, by the desire to have children of both sexes and, secondly, by the preference for male siblings. So the majority of women in every village have shown a preference for a family of three children, two boys and one girl.

The ideal family-sizes of 3.05, 3.07 and 3.01 in Ugala, Ghagga and Ghudani Kalan respectively compare with their completed family sizes of 5.37, 5.79 and 4.01 respectively. In all the three villages the ideal family-sizes are much lower than the achieved family size, although the difference is much less in the case of Ghudani Kalan.

The data presented in Tables 1a, 1b and 1c enable us to gauge the relationship, if any, between the ideal family-size on the one hand and caste difference, type of mobility and the adoption of family planning methods on the other. There are no doubt variations in the average of the ideal family-size according to caste background. But these variations do not totally correspond to the variations in the actual family size of the castes. The correspondence is noticeable in the case of the Scheduled Castes in all the villages and in the case of the Jats in Ghagga and Ghudani Kalan. The Scheduled Castes, whose achieved family sizes are above the average for the village as a whole, also have above average ideal family-sizes. On the other hand, the Jats whose achieved family sizes are below the average for the village also have below-average ideal family-sizes.

There does not appear to be any significant relationship between the ideal family-size and the pattern of occupational mobility although, considering our other findings, one would have expected that the wives of persons with downward occupational mobility would have preferred smaller family sizes; while the expected kind of relationship is met with to some extent in Ghudani Kalan, the situation is quite the reverse in the case of Ugala.

On the other hand, there appears to be some relationship between one's idea about the ideal family-size and one's adoption of family planning methods. This can be inferred from two pieces of evidence.

Table 1a

Average Ideal Family-size of the Wives of the Heads of Households in Ugala according to Caste and Mobility Patterns of Husbands

(Persons adopting Family Planning are shown Separately)

	Total Number of Wives								*Adopters of Family Planning*							
	Upwardly Mobile		*Immobile*		*Downwardly Mobile*		*Total*		*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
Caste	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Brahmin	7	3.14	1	3.00	2	3.50	10	3.20	3	3.00			2	3.50	5	3.20
Rajput	1	3.00	5	3.40	15	3.13	21	3.19	1	3.00	1	3.00	6	3.33	8	3.25
Bania	3	3.00	5	3.00	3	2.33	11	2.82			1	3.00	2	2.00	3	2.33
Khatri	3	2.67	5	2.80	10	2.90	18	2.83	3	2.67	3	3.00	3	2.33	9	2.67
Kamboj	4	3.25	6	3.00	8	2.50	18	2.83	2	3.50	2	3.00	4	3.00	8	3.13
Dhobi/Kahar	4	2.75	5	3.20	4	3.50	13	3.15	3	2.67	2	3.00	1	3.00	6	2.83
Bazigar	1	3.00	2	3.00	2	3.50	5	3.20					1	4.00	1	4.00
Ramdasia	3	3.33	14	2.93	12	3.58	29	3.24			5	3.00	8	3.63	13	3.38
Miscellaneous	5	3.00	13	3.08	4	2.50	22	2.95	2	3.00	5	2.80	3	2.33	10	2.70
Total indicating preference	31	3.03	56	3.04	60	3.07	147	3.05	14	2.93	19	2.95	30	3.10	63	3.02
Undecided	5		25		7		37		—		5		1		6	
GRAND TOTAL	36		81		67		184		14		24		31		69	

Table 1b

Average Ideal Family-size of the Wives of the Heads of Households in Ghagga according to Caste and Mobility Patterns of Husbands

(Persons adopting Family Planning are shown Separately)

	Total Number of Wives								*Adopters of Family Planning*							
	Upwardly Mobile		*Immobile*		*Downwardly Mobile*		*Total*		*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
Caste	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Brahmin	3	2.67	4	2.75	5	2.80	12	2.75	1	2.00			4	2.75	5	2.60
Bania	6	3.00	9	3.11	10	3.10	25	3.08	2	3.50	4	3.00	6	3.50	12	3.33
Khatri	3	2.00	2	3.00	3	2.67	8	2.50	2	2.00			2	3.00	4	2.50
Jat	4	2.50	8	3.30	23	2.87	35	2.94	2	3.00	4	3.25	13	2.92	19	2.95
Tarkhan	1	3.00	7	2.57			8	3.00	1	3.00	4	2.75			5	2.80
Bazigar	2	4.00	19	3.37	3	4.00	24	3.50			9	3.44			9	3.44
Ramdasia	11	3.45	7	3.14	14	3.29	32	3.31	4	3.50	5	2.80	7	2.86	16	3.19
Miscellaneous	6	3.17	10	2.90	6	3.00	22	3.00	2	2.50	2	3.00	4	2.75	8	2.75
Total indicating preference	36	3.06	66	3.11	64	3.05	166	3.07	14	2.93	28	3.11	36	3.06	78	3.05
Undecided	13		26		8		47		1		7		2		10	
GRAND TOTAL	49		92		72		213		15		35		38		88	

Table 1c

Average Ideal Family-size of the Wives of the Heads of Households in Ghudani Kalan according to Caste and Mobility Patterns of Husbands

(Persons adopting Family Planning are shown Separately)

	Total Number of Wives								*Adopters of Family Planning*							
	Upwardly Mobile		*Immobile*		*Downwardly Mobile*		*Total*		*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
Caste	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Brahmin	6	3.17	2	3.00	2	3.00	10	3.10	4	3.00	—		1	3.00	5	3.00
Jat	10	2.80	36	2.67	45	2.84	91	2.77	5	2.60	8	2.63	7	2.43	20	2.55
Ramdasia	6	3.00	24	3.88	3	4.00	33	3.73	3	3.00	10	3.40	1	3.00	14	3.29
Miscellaneous	9	3.11	18	2.83	5	3.00	32	2.94	2	3.00	3	3.67	2	3.00	7	3.29
Total indicating preference	31	3.00	80	3.08	55	2.93	166	3.01	14	2.86	21	3.14	11	2.64	46	2.93
Undecided	1		6		11		18		1		1		1		3	
GRAND TOTAL	32		86		66		184		15		22		12		49	

First, in every village the ideal family-size of adopters of family planning is slightly lower than that of the total number of cases. Second, whereas there are substantial percentages of the total number of subjects in the different villages which are undecided about the ideal family-size, these percentages dwindle considerably in the case of the family planning adopters; in the total samples the percentages of undecided cases in Ugala, Ghagga and Ghudani Kalan are 20, 22 and 10 respectively but among the people who adopt family planning methods the corresponding percentages get reduced to 9, 11 and 6 respectively.

These observations indicate varying degrees of relationship between the ideal family-size on the one hand and caste, mobility pattern and adoption of family planning on the other. But on the whole the relationships are rather weak, due mainly to the fact that family-size preference shows very little variation among the different sections.

Adoption of Family Planning

The achieved family size in almost every society is below the biological maximum. Apart from the reduction due to mortality, the achievement of the size of the family below the biological maximum is accomplished through various methods of deliberate control. Such methods of fertility control may be divided into two broad categories: traditional methods and modern ones. Modern methods of family planning are undoubtedly more efficient, but some societies have achieved small family sizes through traditional methods also. Even some of the developed countries (such as France) had achieved their demographic transition before the refinement of modern family planning methods.

The popularisation of modern family planning methods in India (including the region of the study villages) is barely two decades old. While they are known to the heads of the households studied and hence are a factor in the limitation of the size of their family of procreation, they could not have affected the size of their family of orientation for which their fathers and mothers were responsible. Yet, some of the castes as well as one of the villages had achieved relatively small family sizes even as regards the family of orientation of the present heads of the households. Such small family sizes could not have been achieved without the widespread use of traditional methods of family limitation by the forbears of the present heads of households.

In our investigation, virtually all those who adopted family planning had used or were using modern family planning methods—such as, tubectomy and loops by women and vasectomy and condoms by men. Male users were slightly more than female ones in every village. If it is assumed that the adoption of modern family planning methods is the major means by which our subjects have limited the size of their families, then it follows that the sections which have achieved smaller family sizes would also be those which have used the family planning methods to a greater extent.

With a view to ascertaining this expected behaviour, the average family sizes of the heads of households are shown according to caste and mobility patterns in Ugala, Ghagga and Ghudani Kalan, in Tables 2a, 2b and 2c respectively. In every table the distribution is shown separately for the adopters and the non-adopters of family planning methods. However, no distinction is made between the male-specific or female-specific family planning methods. For an overall assessment the basic data from the three tables are summarised in Table 3 which shows the percentage of heads of households adopting family planning methods according to village and mobility patterns.

We may first consider the results of Table 3, some of which are quite unexpected. Ghudani Kalan, the village with the smallest family size also has the smallest percentage of subjects adopting modern family planning methods which is quite surprising. The inevitable inference, therefore, is that couples in this village also use traditional family planning methods extensively. Such methods had no doubt been used successfully by their elders. Our inquiry, however, did not address itself to this important question.

The results of Table 3 which are quite expected, refer to the percentage of subjects who have adopted family planning methods in the different categories of mobility types; by and large, the lower the family size in a category, the larger is the percentage of the subjects resorting to family planning methods. In Ugala and Ghagga the downwardly mobile categories, and in Ghudani Kalan the upwardly mobile ones have the smallest family size in their respective villages and accordingly they also have the largest

Table 2a

Average Family Size among the Adopters and Non-adopters of Family Planning among Heads of Households in Ugala

Caste	Adopters of Family Planning								Non-adopters of Family Planning							
	Upwardly Mobile		Immobile		Downwardly Mobile		Total		Upwardly Mobile		Immobile		Downwardly Mobile		Total	
	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size
Brahmin	3	4.33	—	—	2	5.00	5	4.60	5	4.20	1	6.00	—	—	6	4.50
Rajput	1	9.00	2	4.50	6	4.00	9	4.67	—	—	5	6.20	11	3.27	16	4.19
Bania	—	—	1	6.00	2	4.50	3	5.00	3	6.33	4	4.50	1	5.00	8	5.25
Khatri	3	5.00	3	5.00	3	2.00	9	4.00	1	7.00	2	5.50	7	4.29	10	4.80
Kamboj	2	6.00	2	5.00	4	4.00	8	4.75	2	2.00	4	2.25	4	3.00	10	2.50
Dhobi/Kahar	3	3.00	2	7.00	1	9.00	6	5.33	1	9.00	5	4.20	4	1.50	10	3.60
Bazigar	—	—	—	—	1	8.00	1	8.00	1	5.00	5	3.80	1	5.00	7	4.14
Ramdasia	—	—	7	4.71	9	4.78	16	4.75	5	5.00	16	4.13	7	3.86	28	4.22
Miscellaneous	2	4.50	7	4.43	3	5.00	12	4.58	4	5.25	15	5.87	1	3.00	20	5.60
TOTAL	14	4.79	24	4.92	31	4.52	69	4.71	22	5.05	57	4.72	36	3.44	115	4.38

Table 2b

Average Family Size among the Adopters and Non-adopters of Family Planning among Heads of Households in Ghagga

Caste	*Adopters of Family Planning*								*Non-adopters of Family Planning*							
	Upwardly Mobile		*Immobile*		*Downwardly Mobile*		*Total*		*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
	No.	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Brahmin	1	2.00	—	—	4	4.00	5	3.60	2	3.50	5	5.20	1	3.00	8	4.50
Bania	3	7.00	5	5.60	6	3.00	14	4.79	9	4.22	5	2.80	5	4.80	19	4.00
Khatri	2	5.00	—	—	3	3.33	5	4.00	1	5.00	3	3.00	2	6.00	6	4.33
Jat	2	5.00	5	5.00	13	4.15	20	4.45	2	1.50	6	4.50	13	4.38	21	4.14
Tarkhan/ Blacksmith	—	—	5	4.00	1	3.00	6	3.83	1	4.00	4	5.25	—	—	5	5.00
Bazigar	—	—	13	5.85	—	—	13	5.85	3	1.67	20	4.55	3	3.67	26	4.12
Ramdasia	5	6.40	5	5.40	7	4.29	17	5.24	9	5.89	4	4.50	8	3.38	21	4.67
Miscellaneous	2	2.50	2	4.50	4	4.00	8	3.75	7	3.71	10	3.40	2	5.00	19	3.68
TOTAL	15	5.33	35	5.29	38	3.87	88	4.68	34	4.15	57	4.21	34	4.24	125	4.20

Table 2c

Average Family Size among the Adopters and Non-adopters of Family Planning among Heads of Households in Ghudani Kalan

Caste	*Adopters of Family Planning*								*Non-adopters of Family Planning*							
	Upwardly Mobile		*Immobile*		*Downwardly Mobile*		*Total*		*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
	No.	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Brahmin	4	3.75			1	6.00	5	4.20	2	4.00	2	4.50	1	5.00	5	4.40
Jat	6	3.67	8	3.63	7	3.85	21	3.71	5	3.40	32	2.78	45	3.62	82	3.28
Ramdasia	3	5.00	11	3.36	2	4.00	16	3.75	3	1.33	15	4.13	5	5.20	23	4.00
Miscellaneous	2	2.50	3	3.00	2	3.00	7	2.86	7	3.00	15	4.27	3	3.33	25	3.80
TOTAL	15	3.80	22	3.41	12	3.92	49	3.65	17	2.94	64	3.52	54	3.78	135	3.55

Table 3

Percentage of Heads of Households adopting Family Planning according to Village and Occupational Mobility Patterns

Village	*Upwardly Mobile*	*Immobile*	*Downwardly Mobile*	*Total*
Ugala	38.88	29.63	46.27	37.50
Ghagga	30.61	38.04	52.78	41.31
Ghudani Kalan	46.88	25.58	18.18	26.63

percentage of subjects adopting family planning methods in their respective villages. These trends establish the fact that the adoption of modern family planning methods is the major means by which the different sections of the population have tried to limit their family sizes.

We may now return to a detailed consideration of Tables 2a, 2b and 2c. In Ugala, relatively the lowest percentage of immobile heads of households have adopted family planning (Table 3) and that too when their families have grown larger than those of the family-planning adopters in the other two categories (Table 2a). On the other hand, downwardly mobile persons have adopted family planning to the largest extent and that too when their family size is smaller than that of the other two categories. The Banias (among the higher castes) and the Bazigars (among the Scheduled Castes) have adopted family planning the least. These castes also have the lowest percentage of downwardly mobile persons, although they are poles apart in their economic circumstances. However, the downwardly mobile persons even among the Banias and the Bazigars are equally prone to adopt family planning compared with such persons in the other castes.

The trend in Ghagga (Table 2b) also is more or less similar to that in Ugala except that in Ghagga even such unlikely persons as the immobile and upwardly mobile Banias and Bazigars have shown equal propensity with the others to adopt family planning; but they have done so when their families have become too large compared with the families of the others in the corresponding mobility types. For the same reasons some of the upwardly mobile as well as immobile heads of households among the Ramdasias have also resorted to family planning.

Ghudani Kalan (Table 2c), however, presents a different picture, with trends almost contrary to those seen in the other two villages.

Unlike the other two villages, in this village the downwardly mobile persons among the family planning adopters have the largest family size. Second, the percentage of adopters is the smallest among the Jats who have the smallest size of family and the highest among the Brahmins who have largest size of family. Another paradox which has been already pointed out is that although Ghudani Kalan has the smallest family size of all the three villages, it has the least percentage of subjects adopting modern family planning methods.

To some extent the anomalies related to adoption of family planning noticed in the case of Ghudani Kalan may stem from the coarseness of the data presented in Tables 2a, 2b and 2c, inasmuch as they also include persons for whom the adoption of family planning methods is irrelevant. Usually family planning is recommended to women of childbearing age, who have three or more children. These are 'eligible' women in the parlance of family planning motivators. Therefore, in order to make our analysis more precise, I have considered only those heads of households whose wives are below 44 years and have three or more children (Tables 4a, 4b and 4c). Table 5 gives a summary of these three tables showing the percentage of eligible heads of households adopting family planning in the different types of mobility categories.

When we consider the broad trends (Table 5) the pattern is somewhat different from that observed in Table 3 which refers to all the heads of households. First, understandably, in every village the percentage of family planning adopters among eligible persons is much larger than in the total number of heads of households although the relative order of the villages in this respect is the same. Secondly, in all the three villages the percentage of adopters is the least in the immobile category; but, as in the case of the total sample, in this case also the highest percentage of family planning adopters is found in the downwardly mobile category in Ugala and Ghagga and in the upwardly mobile category in Ghudani Kalan. Insofar as the least percentage of family planning adopters are found in the immobile category, the information about the eligible subjects shows a greater degree of similarity among the three villages compared with their situation in respect of the data presented in Tables 2a, 2b and 2c.

The similarity in adoption of family planning among the three villages is further enhanced in another respect also when we consider the detailed information presented in Tables 4a, 4b and 4c. In every

Table 4a

Average Family Size among Heads of Households with Wives above 44 Years of Age and with Three or more Children in Ugala

Caste	Adopters of Family Planning								Non-adopters of Family Planning							
	Upwardly Mobile		Immobile		Downwardly Mobile		Total		Upwardly Mobile		Immobile		Downwardly Mobile		Total	
	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size
Brahmin	2	3.50	—	—	2	5.00	4	4.25	1	3.00	—	—	—	—	1	3.00
Rajput	—	—	2	4.50	6	4.00	8	4.13	—	—	3	4.67	2	4.50	5	4.60
Bania	—	—	1	6.00	1	4.00	2	5.00	1	6.00	—	—	1	4.00	2	5.00
Khatri	3	4.33	3	5.00	—	—	6	4.67	—	—	1	5.00	1	7.00	2	6.00
Kamboj	2	6.00	1	4.00	3	4.33	6	4.83	1	3.00	1	3.00	3	3.67	5	3.40
Dhobi/Kahar	2	4.00	—	—	1	9.00	3	5.67	1	9.00	2	5.00	1	5.00	4	6.00
Bazigar	—	—	—	—	—	—	—	—	1	5.00	4	4.50	1	5.00	6	4.67
Ramdasia	—	—	4	5.00	6	4.67	10	4.80	3	5.67	6	5.50	2	5.50	11	5.54
Miscellaneous	1	5.00	5	4.80	1	4.00	7	4.71	1	3.00	3	4.67	1	3.00	5	4.00
TOTAL	10	4.50	16	4.88	20	4.60	46	4.67	9	5.11	20	4.85	12	4.58	41	4.83

Table 4b

Average Family Size among Heads of Households with Wives above 44 Years of Age and with Three or more Children in Ghagga

Caste	*Adopters of Family Planning*								*Non-adopters of Family Planning*							
	Upwardly Mobile		*Immobile*		*Downwardly Mobile*		*Total*		*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
	No.	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Brahmin	—	—	—	—	3	4.67	3	4.67	—	—	1	9.00	1	3.00	2	6.00
Bania	2	6.50	2	3.00	4	3.75	8	4.25	2	6.50	2	6.50	2	5.50	6	6.17
Khatri	2	5.00	—	—	1	5.00	3	5.00	—	—	2	3.00	—	—	2	3.00
Jat	2	7.00	2	4.50	5	4.20	9	4.89	—	—	2	4.50	7	5.00	9	4.89
Tarkhan/ Blacksmith	1	3.00	3	4.00	—	—	4	3.75	1	4.00	1	8.00	—	—	2	6.00
Bazigar	—	—	8	6.00	—	—	8	6.00	—	—	8	5.13	1	4.00	9	5.00
Ramdasia	3	8.00	4	5.75	6	4.33	13	5.62	2	5.50	4	4.50	2	3.00	8	4.38
Miscellaneous	1	3.00	1	3.00	3	3.33	5	3.20	3	3.67	1	3.00	1	6.00	5	4.00
TOTAL	11	6.09	20	5.05	22	4.14	53	4.89	8	4.88	21	5.10	14	4.64	43	4.91

Table 4c

Average Family Size among Heads of Households with Wives above 44 Years of Age and with Three or more Children in Ghudani Kalan

Caste	Adopters of Family Planning								Non-adopters of Family Planning							
	Upwardly Mobile		Immobile		Downwardly Mobile		Total		Upwardly Mobile		Immobile		Downwardly Mobile		Total	
	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size	No.	Average Family Size
Brahmin	3	4.67	—	—	—	—	3	4.67	1	3.00	1	3.00	—	—	2	3.00
Jat	3	4.00	6	4.00	6	4.00	15	4.00	—	—	9	3.78	9	4.00	18	3.89
Ramdasia	2	6.50	5	3.80	2	4.00	9	4.44	—	—	6	4.50	2	4.50	8	4.50
Miscellaneous	1	3.00	1	4.00	2	3.00	4	3.25	1	3.00	7	5.00	2	4.00	10	4.60
TOTAL	9	4.67	12	3.92	10	3.80	31	4.10	2	3.00	23	4.31	13	4.08	38	4.16

village the average family size of the adopters is the smallest in the downwardly mobile category. This is also, by and large, true of the various castes in every village. The sharp differences in the percentages of family planning adoption noticed in the case of some of the castes with reference to the total sample are very much reduced when viewed from the sample of eligible persons. Thus, this relatively more refined analysis places the role of mobility patterns in the adoption of family planning in a sharper focus.

Besides the so called 'eligible' persons there are also a number of other persons who have taken advantage of family planning. They may be broadly divided into two categories: those whose wives are above 45 years but who had adopted family planning during the fertile period of their wives in the past, and those with wives below 44 years but who have adopted family planning even though they have one or two children. A brief consideration of the first set of subjects may prove useful.

Table 6 presents the data pertaining to the heads of households whose wives are above 45 years and who have adopted family planning. The number and average family-size of the subjects are shown according to their mobility pattern and different villages. The pattern more or less follows the relevant distribution in the case of the 'eligible' persons but for the fact that the completed family-size of the older group in all categories (except the immobile category in Ghudani Kalan) are larger compared to their younger counterparts. In every village the family sizes in the upwardly mobile category is the largest and in Ugala and Ghagga the family sizes of the downwardly mobile categories are the smallest. In Ghudani Kalan, however, the smallest family size is found in the immobile category. On the whole, this evidence is also in agreement with the general tendency on the part of the downwardly mobile persons to adopt family planning when their family sizes are relatively smaller.

Table 5

Percentage of Eligible Heads of Households adopting Family Planning according to Village and Occupational Mobility Patterns

Village	*Upwardly Mobile*	*Immobile*	*Downwardly Mobile*	*Total*
Ugala	52.63	44.44	62.50	52.87
Ghagga	57.89	48.78	61.11	55.21
Ghudani Kalan	80.00	34.29	43.43	44.12

Table 6

Average Family Size of Heads of Households with Wives who are 45 Years and Older but who have Adopted Family Planning

Village	*Upwardly Mobile*		*Immobile*		*Downwardly Mobile*		*Total*	
	No.	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*	*No.*	*Average Family Size*
Ugala	3	6.33	6	6.00	8	5.25	17	5.71
Ghagga	1	8.00	12	6.33	10	4.90	23	5.78
Ghudani Kalan	1	6.00	7	3.57	2	4.50	10	4.00

To sum up, a notable feature of our study is that whereas the heads of households in our sample prefer smaller family sizes they have achieved larger families. The gap between the ideal family-size and the actual family-size, however, is narrower in Ghudani Kalan. The relationship between the ideal family-size and the actual family-size which is reported in other studies (e.g., Anand, 1964; Girard and Roussel, 1982) is not evident from this study. The relationship between ideal family-size and mobility pattern is also not visible. But there is some evidence, although slight, to show that the ideal family-size is related to the adoption of family planning; those who have adopted family planning practices prefer family-sizes slightly lower than those preferred by persons not adopting family planning.

It would appear that the subjects of our study use both traditional and modern methods of family planning although our information pertains to only the modern methods. Ghudani Kalan, the village with the smallest average family size also has relatively the smallest proportion of heads of households adopting modern methods. Such a situation is rather unexpected. In Ugala and Ghagga, villages with relatively large family sizes, the downwardly mobile persons have adopted family planning to a greater extent whereas in Ghudani Kalan it is the upwardly mobile persons who have done so; but in all cases it is the sections with smaller family sizes who have resorted to modern family planning methods to a greater extent. On the whole, there is a consistent relationship among the variables of mobility pattern, family size and the adoption of family planning. Those who are donwnwardly mobile, by and large, not only resort to family planning to a larger extent but also do so while their families are relatively smaller.

8

Summary and Discussion

Summary of Findings

A proper understanding of the nature of the relationship between economic development and population growth is specially significant in the formulation of policies for the solution of the problem of demographic transition in the developing countries. It is generally assumed that economic development and population growth are negatively related and an explanation of such a relationship has been provided with the economic decision-making model. But there is accumulating evidence which tends to disconfirm this kind of relationship.

A number of studies which have dealt with this topic and are based on aggregated observations for a country or a region as a whole, have mainly used the perspectives of demography and economics only. They have viewed the relationship from the economic decision-making model which rests on the theoretical concept of children as durable consumer goods for their parents. Approaches such as these are not best suited for the testing of hypotheses.

The major departures of this study from the existing studies on the topic are that it is conducted on a micro-level by selecting three large villages, it adds the perspective of sociology to those of demography and economics, and it uses the variable of inter-generational occupational mobility as a key socio-economic variable influencing demographic behaviour.

The three villages, Ugala, Ghagga and Ghudani Kalan, are chosen from the states of Haryana and Punjab in the north-western region of India. They have undergone rapid economic development in recent decades. Besides being large in population size, the villages have predominantly agricultural economies, are relatively free from urban influence and have abnormal rates of population growth—either consistently very high (Ugala and Ghagga) or consistently very low (Ghudani Kalan)—during the past three decades. A simple random sample of one-third of the households from every village was taken up for a detailed investigation.

All the three villages have experienced far-reaching changes and remarkable growth in their agriculture, which are characteristic of the transformation of the economy of the region in recent times. Their economies have also undergone some sectoral transformation resulting in a decline in the proportion of their agricultural occupations. But there are noticeable differences in their emerging patterns of economy. The sectoral transformation, which is an important mark of economic development, is relatively more pronounced in Ghagga and Ghudani Kalan than in Ugala.

There are, however, basic differences in the economic development of Ghagga and Ghudani Kalan; whereas the former village is more developed in trade, the latter is better developed in the services sector. Ghudani Kalan also has better educational and health care facilities as compared with the other two villages. Although Ugala is relatively the least developed in terms of economic transformation, its agricultural situation insofar as per-household landownership is concerned, is better than in the other two villages.

When the villages are compared with regard to the occupational prestige of the heads of the households it is found that Ghudani Kalan has a much larger proportion of subjects in the middle range of prestige as compared with Ugala and Ghagga. On the other hand, Ghagga has relatively the highest percentage of subjects in the lowest prestige category. Ghudani Kalan seems to project a better picture of the socio-economic background of its respondents among the study villages when viewed from their occupational prestige. This impression is further confirmed by the fact that the standard of living of the people of Ghudani Kalan on the whole is also much higher than that in the other two villages; Ugala is at the lowest level in this respect.

Thus when we compare the three villages on the combined criteria of socio-economic infrastructure, economic transformation, and socio-economic background and living conditions, Ghudani Kalan turns out to be the most developed village and Ugala the least developed one. However, in terms of economic transformation alone Ghagga has a better potential for growth.

When the general socio-economic development of the villages is related to their population growth rates, there does not appear to be a clear cut relationship between the two variables. There are two components of population growth: immigration and family size. Both these components are larger in Ugala and Ghagga, the villages with higher growth rates. The consistently low growth rates of Ghudani Kalan are due to low rates of immigration as well as lower family size. It is worth noting that Ugala and Ghagga (which are similar in population growth rate) are dissimilar in their levels of economic development. Hence the tenuous nature of the relationship between economic development and population growth.

Family sizes in all the three villages are not at all related with the variables of income and occupational prestige. This, therefore, disconfirms the hypothesis derived from the economic decision-making model, which posits a negative correlation between family size on the one hand and income and family status on the other. There is, however, some negative relationship observed between the educational level of the mother or of the father and family size. But because of the small proportion of educated parents in the villages, the influence of education on population growth in general is as yet minimal.

The absence of a correlation between the economic variables and family size should not be taken to mean that economic change and development do not have any influence on population growth. It only means that the variables of socio-economic status—such as, income and occupational prestige—do not reflect the actual change experienced by individuals.

Therefore, a different approach has been adopted in this study to assess the role of economic change and development on family size. The aspect of economic development which is considered important for the present purposes is the sectoral transformation of the economy, and the precise economic phenomenon which is assumed to have important behavioural consequences is inter-generational occupational mobility. There are other factors besides economic change which give rise to occupational mobility, but the sectoral transformation of the economy would undoubtedly be a major factor. However, economic development does not affect all the members of a community in a uniform manner; on the contrary, the different sections are influenced differently.

Our findings show that the caste system which is an important aspect of the social structure of the communities under study is a major factor which modifies the influence of economic development. By and large the fruits of economic development have gone to the members of different castes according to the positions of their castes in the caste hierarchy. The higher castes have benefited more than the lower ones. There is a high degree of correlation between the occupational prestige of fathers and sons. This has resulted in the perpetuation of the inequalities existing in the caste system. The relative occupational-prestige positions of the various castes in a village, with notable exceptions, have remained constant over the generations.

The occupations in the non-agricultural sector in the developing economy are more accessible to those who are predisposed to commute or migrate to outside places of work. In this respect the members of the landowning castes are less prone to move outside the village and hence are less able to benefit from the mobility opportunities. Therefore even among the higher castes themselves some castes have benefited from the new opportunities more than others. Thus the new economic opportunities have been channelled through the caste system. The new opportunities in the communities under study have affected mostly the trade and services sectors. The castes which have benefited most from these opportunities are the traditional trading castes of Banias and Khatris and the professional castes, such as the Brahmins.

In understanding the role of inter-generational occupational mobility as an indicator of economic adjustment two kinds of questions arise. First, does the size of family affect economic adjustment? Second, does the kind of economic ajdustment influence family size? These two questions are interdependent. It is only when the family size influences economic adjustment that the latter is likely to affect the former. However, the families involved in the two different contexts suggested by the two questions are different; in the first instance it is one's family of orientation and in the second it is one's family of procreation.

It turns out from our findings that family size does influence the pattern of inter-generational occupational mobility. Heads of households who are born in larger families are more likely to experience downward occupational mobility as compared with those who are born in smaller families. Immobile persons also belong to relatively larger families as compared with the persons who are upwardly mobile. The trends are similar in all the three villages and they apply to the sons of the heads of households as well.

The influence of family size on economic adjustment, however, varies in different castes. The adverse impact of a large family size on economic adjustment is less severe in castes which have availed themselves of the mobility opportunities provided by the developing economy.

When we examine the size of the family of procreation of the heads of households it is found, especially in Ugala and Ghagga (the villages with larger family sizes), that persons who have experienced downward occupational mobility have smaller family sizes compared with those who have experienced upward mobility or who are stationary in their father's position. In this case also there is a caste variation. The effect of mobility on family size is reduced in the case of castes which have enjoyed mobility opportunities—such as the trading castes. It is most acute in the case of farming castes. The farming castes have experienced downward mobility to the largest extent both on account of reduced landholdings through multiple inheritance and because of non-utilisation of mobility opportunities, and in all the three villages these castes have the smallest family sizes among comparable status groups.

The castes on the lowest rungs of the status hierarchy also have larger family sizes but for different reasons. Since they generally follow the occupations of the lowest degree of prestige, most of them do not experience downward mobility even though they eke out a wretched existence. But wherever their members occupy relatively higher prestige occupations and are exposed to the grim prospects of downward mobility, they also show a tendency to have smaller families.

When family size is on the whole already small (as in Ghudani Kalan) the particular effect of mobility patterns on family size becomes reduced or even tends to be reversed.

Other studies have indicated that the achieved family size of the subjects is related to the ideal family-size and that the small family size is achieved through the practice of family planning. Therefore one would expect to find in our study villages that the downwardly mobile persons who tend to have smaller family sizes would also tend to indicate smaller ideal family-size as well as would more often adopt family planning than the other categories.

Contrary to our expectations the relationship between the mobility pattern and ideal family size is not clearly visible in any of the villages; nor is there a clear cut relationship between the ideal family size and actual family size. On the other hand, the averages of the ideal family size in all the villages are nearly the same and the gap between the ideal family size and actual family size is quite wide (although it is lower in Ghudani Kalan). For reasons not considered in this study, the ideal family-size indicated by the subjects does not fit the reality. It appears that the widespread official propaganda about the small family norm has had a more or less uniform effect on the attitude of the villagers.

The situation with regard to the adoption of family planning, however, is different, and conforms to our expectations. Our study has not focused attention on traditional family planning methods which also seem to be operating and effective—especially in Ghudani Kalan where family size is the smallest. However, it is very clear that the achievement of a smaller family size is related to the practice of modern family planning methods. The adoption of family planning is also related to the mobility pattern; downwardly mobile persons who tend to have smaller family sizes also tend to adopt family planning to a larger extent and also do so while their families are relatively smaller.

Discussion of Some Relevant Issues in the Light of the Earlier Findings

The findings of this study unambiguously demonstrate the effect of economic change and development on population growth but in ways not hitherto recognised by other studies. They agree with the general observation that fertility behaviour reflects the broader changes taking place in the society (Aries, 1980: 645). Economic changes are perhaps the most important ones. So we find that the change and development in the economy of the villages have been accompanied with substantial changes in the family size. But the economic decision-making model (which is frequently used to explain the relationship between economic development and family size) has been found wanting in accounting for such a relationship in the study villages.

In fact, the economic decision-making model leaves unexplained many situations relating to the relationship between economic development and population growth. It seems to us that the basic deficiency of the economic decision-making model lies in its theoretical concept of children constituting durable consumer goods for their parents. It would mean that parents are essentially self-centred in adjusting their fertility behaviour to economic changes. That assumption is not consonant with reality.

The examination of the relationship between economic development and population growth in this study is based on the assumption that such a relationship is mediated by the social structure. This assumption would imply that, especially in societies whose given structures are self-perpetuating, parents, in their fertility behaviour in response to economic change, are also concerned about the interests of their offspring besides their own interests.

To make this statement explicit it is first of all necessary to recognise that the economy and the social structure intersect in occupation. One's position and status in society are, for the most part, dependent upon the prestige of one's occupation; so is the satisfaction of one's many needs dependent upon the remuneration one derives from one's occupation. One is therefore greatly concerned with one's career prospects. But the linkage of one's occupation to the social structure not only induces a person to live up to his father's status which he had enjoyed during his childhood but also obliges him to enable his children to continue on his status level, if not improve upon it.

So we find that in most developing societies in which there are rigid social structures, as well as in the developed ones, there is a high degree of correlation between the occupational status of fathers and sons. The inter-generation stability in occupational prestige actually reflects the concern of the parents for their children which is nowhere better expressed than in the rural communities of India. Therefore, when the parents perceive that the large size of the family is likely to jeopardise the status maintenance of their children, they are likely to limit their family size. As seen in our study villages, such a realisation dawns upon the parents more often if they themselves have been the victims of downward mobility as a result of coming from a large family. In this manner economic change, social structure and population growth are inter-related.

In the Indian setting the inter-relationship between economic change, social structure and population growth has another important aspect. It refers to the channelling of economic change through the existing social structure which is characterised by the caste system, whereby some groups benefit from economic changes more than others. Consequently, the fertility behaviour of people occupying different positions in the social structure is affected in different ways. Those groups which (by virtue of their position in the social structure) stand to gain from economic changes, would feel more secure about their own and about their children's economic adjustment and hence would be unrestrained in having larger families; those groups which stand to lose on the economic front would restrict their families to a smaller size. The groups at the lowest rungs of the social ladder, which are impervious to economic change, have no reason for controlling the size of their family.

Thus the model of explanation derived from the assumptions about the inter-relationships among economic, social structural and demographic variables fits the findings of our study.

The next relevant question is how far are the findings of this study generalisable to at least the rural areas of the region. One of the major arguments in favour of this is that the inter-relationships between economic change, social structure and population growth are of the same kind in all the three villages although the villages have been chosen from three different districts and have considerable variation in their characteristics. Nor are these findings confined to the villages of this investigation alone. Similar results in relation to family size were obtained in a longitudinal field study conducted in the 1950s in a group of villages in Ludhiana district, Punjab, not far from Ghudani Kalan. In that study also the fertility of the cultivating caste of Jats was found to be substantially lower than that of the other higher castes of Brahmins, Banias and Khatris on the one hand and that of the lower caste of Ramdasias on the other (Wyon and Gordon, 1971: 140).

It seems that the landowning and farming castes, not only in Punjab and Haryana but all over India, are experiencing conditions of downward mobility and hence have relatively smaller family sizes. In a study conducted in Tamil Nadu, a region very different from Punjab and Haryana in its culture and geography, it is also found that the major landowning caste of Vellalas have the smallest family size among the people of the region and the trading community of Muslims have the largest family size (Omran and Standley, 1976: 96–111).

The explanatory model proposed in this study would provide a more satisfactory understanding of the almost universal phenomenon of the relatively large family size of poorer people. Such a phenomenon has been widely noticed in India, so much so that the fact that even affluent people sometimes have large families has been ignored. Mahmood Mamdani, who made a detailed study of a village in Punjab to find out the cause of the lack of success of an action programme of family planning introduced earlier (Wyon and Gordon, 1971), has come to the conclusion that the poverty of the deprived sections is not because of their large family size. On the contrary, their large family size is a coping mechanism in their deprived conditions (Mamdani, 1972).

Mamdani is right in assuming that poverty, by and large, is not the cause of large family size but is a structural phenomenon which cannot be resolved only through population control. But he seems to have overdrawn the picture in emphasising that a large family is necessary for poor people. Such a conclusion is, no doubt, influenced by the Marxist approach to the problem of overpopulation (Michaelson, 1981: 11–35). The fact that poor people use their children for economic gains at an early age does not mean that many children are necessary for maintaining the parents. If poor people beget more children it is because their number alone does not change their existential situation; since they are at the bottom of the economic ladder, their situation does not change whether or not they have fewer children. Our findings show that the same theoretical model can be used for explaining fertility behaviour among the rich and the poor.

The findings of the study and the explanation put forward are not unique to India. A similar phenomenon is said to have occurred in Europe during the early industrial period when agricultural areas contained much smaller families than areas under the process of industrialisation (Keyfitz, 1982: 732) due, as it now appears, to the aggravating problem of downward mobility in the former areas and the growing opportunity for upward mobility in the latter. The smaller family size of the agricultural castes and the larger family size of the trading castes in our study has its parallel in this European experience.

The model of fertility behaviour put forward in this study is very similar to the one suggested by Easterlin (1968) to explain the change in fertility in the later phases of demographic transition in Western countries. According to him, it is not the family's economic status as such, but its economic status relative to its aspirations and relative to its parents' incomes, which is decisive for its fertility performance. The relative economic situation of the family indicated by Easterlin is better expressed by the variable of inter-generational occupational mobility.

Easterlin's model neatly explains the phenomenon of the baby boom in the United States and the Western countries soon after World War II and the subsequent low birth rates in those countries in the 1970s. According to Easterlin, the baby boom was due to the mobility opportunities available to parents of the 1950s because of the fact that their generation formed a smaller cohort which was a sequel to their birth during the depression of the 1930s. On the other hand, parents of the 1970s were facing the problem of downward mobility as they belonged to the larger cohort of the baby boom generation; hence they had to cut down their family size. The similarity of this phenomenon with the findings of our study lies in the fact that, in our study villages, persons belonging to smaller families of orientation are economically better adjusted than those belonging to the larger ones and that downwardly mobile persons have smaller family sizes than the others.

Demographers have also pointed out the possibility of the occurence of alternate waves of rise and fall of birth rates in the post-transition phase (Keyfitz, 1982: 740). Our study suggests that such a possibility exists even in developing countries which have yet to complete their demographic transition. We have found that persons born in large families in a given generation, because of their greater chances of adverse economic adjustment, beget smaller families in the next generation. Some such phenomenon must have occurred in the peculiar demographic situation of Cuba pointed out earlier (Diaz-Briquets and Perez, 1982). In the first flush of the Cuban revolution when the economy boomed, there was a spurt in the population growth rate; with the subsequent slump there was a corresponding decline in the birth rate. Thus economic security and insecurity respectively stimulate and retard the population growth rate.

We may finally consider the question whether economic development is the only way of achieving a stable demographic transition in the developing countries. Our findings suggest that at least in the early stage of economic development, insofar as it promotes occupational mobility, development actually stimulates or at least sustains the existing family sizes. Such a suggestion is consonant with the observation of Keyfitz (1982: 734) that for developing countries some increase in fertility tends to occur on the eve of modernisation. This is for the more important reason of improved mobility opportunities than for those reasons alone which have been pointed out by Keyfitz (such as the abandonment of traditional practices due to modernisation). But it should be borne in mind that the mobility opportunities accrue to the various sections in different proportions and consequently the population growth rates of different sections would be affected in differential ways.

Whereas the initial stages of economic development may stimulate population growth rate, the advanced stages are likely to inhibit it. The agent of such a change would appear to be the increasing level of education which accompanies economic development. The transformation of the economy due to development gives rise to a greater degree of formal organisation of economic activity, which rests on the educational attainment of the people. In the underdeveloped economy, with its informal organisation, there is little correlation between occupational prestige or income on the one hand and education on the other; but the degree of correlation increases with the development of the economy. On the other hand, there is accumulating evidence about the existence of a negative correlation between educational level and family size. Perhaps the negative correlation between income and family size reported in some studies is due to the fact that in the societies referred to in those studies there is a correlation between education and income. This issue, however, needs further examination.

Meanwhile, it would not be very sound advice to ask developing countries to rely upon economic development alone for the attainment of demographic transition on the plea that at a lower level of development the large family size is functional. Our findings show that the large family size leads to adverse economic adjustment even in the absence of economic development. But economic development is, doubtless, to be welcomed for its own sake, and in the long run for population control.

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